THE EFFECT OF THE COVID-19 PANDEMIC ON INTERIOR ARCHITECTURE EDUCATION: STUDENTS' POINT OF VIEW

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ABSTRACT

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The World Health Organization (WHO) declared a global epidemic in March 2020 due to the COVID-19 virus, which first appeared in Wuhan, China, and poses a deadly risk to humans. As in many sectors, changes and transformations have taken place in the field of education as well. Both communication methods and educational models of the traditional education paradigm have changed. After the start of distance education, technology-based tools have replaced the courses continuing within the framework of face-to-face education. Instructors and students experienced five different education models in synchronous and asynchronous lessons between the years 2020 and 2022. In each of these different education models experienced, positive and negative aspects have emerged, and a change has begun towards more intensive technology use in education compared to the pre-pandemic period. In this context, the aim of this thesis is to examine and evaluate the problems, opportunities, and changes in Interior Architecture discipline education during and after the pandemic and to make suggestions about the future of Interior Architecture education in the context of the data obtained. In the scope of the research, The curriculum of Çankaya University Interior Architecture Department and the transition stages from the old face-to-face education model to the new face-to-face education model were examined, and the positive and negative aspects of five different education models were analyzed in the context of the Design Studio courses, which form the backbone of Interior Architecture education. Within the scope of the thesis, by focusing on the values that can positively affect the design education of the department during and after the pandemic, it has

been tried to capture with a pedagogical approach how students and academicians cope with the compulsory transformation in Interior Architecture education.

Keywords: Covid-19 Pandemic; Education Models; Interior Architecture Education; Design Studio Concept; Digitalization.

ÖZET

COVID-19 PANDEMİSİNİN İÇ MİMARLIK EĞİTİMİNE ETKİSİ: ÖĞRENCİLERİN GÖRÜŞLERİ

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Dünya Sağlık Örgütü (DSÖ), Çin'in Wuhan kentinde ortaya çıkan ve insanlar için ölümcül bir risk oluşturan COVID-19 virüsü sebebiyle Mart 2020'de küresel bir salgın ilan etmiştir. Bu sebeple geleneksel eğitim paradigmasının hem iletişim yöntemleri hem de eğitim modelleri değişime uğramış, yüz yüze eğitim çerçevesinde devam eden derslerin yerini teknoloji tabanlı araçlar alarak uzaktan eğitime geçilmiştir. 2020-2022 yılları arasında eğitimciler ve öğrenciler senkron ve asenkron olarak işlenen derslerde 5 farklı eğitim modeli deneyimlemişlerdir. Deneyimlenen bu farklı eğitim modellerinin her birinde olumlu ve olumsuz olan hususlar belirmiş ve eğitimde pandemi öncesine göre daha yoğun teknoloji kullanımına doğru değişim başlamıştır. Bu hususlar doğrultusunda tezin amacı; pandemi döneminde ve sonrasında İç Mimarlık disiplini eğitiminde yaşanan sorunları, olanakları ve değişimleri inceleyip değerlendirerek, elde edilen veriler bağlamında İç Mimarlık eğitimi ile ilgili geleceğe dair önerilerde bulunmaktır. Araştırma kapsamında; Çankaya Üniversitesi İç Mimarlık Bölümü müfredatı ve eski yüz yüze eğitim modelinden yeni yüz yüze eğitim modeline geçiş aşamaları incelenmiş ve 5 farklı eğitim modelinin olumlu ve olumsuz yönleri, İç Mimarlık eğitiminin omurgasını oluşturan Tasarım Stüdyosu dersleri bağlamında, analiz edilmiştir. Tezde, pandemi sırasında ve sonrasında bölümün tasarım eğitimini olumlu yönde etkileyebilecek değerlere odaklanılarak, öğrencilerin ve akademisyenlerin İç Mimarlık eğitimindeki zorunlu dönüşümle nasıl başa çıktıkları hususları pedagojik bir yaklaşımla yakalanmaya çalışılmıştır.

Anahtar Kelimeler: Covid-19 Pandemisi; Eğitim Modelleri; İç Mimarlık Eğitimi; Tasarım Stüdyo Konsepti; Dijitalleşme.

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I dedicate this thesis to my esteemed grandfather, Op. Dr. Ali Hikmet KOÇOĞLU, who has never withheld his support from me since I was a little girl, and who has always been proud of my achievements.

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LIST OF SYMBOLS AND ABBREVIATIONS

SYMBOLS

n	: Number
p	: Percentage

ABBREVIATIONS

AR	: Augmented Reality
CoV	: Coronavirus
CoHE	: Council of Higher Education
CSG	: Coronavirus Research Group
DSÖ	: Dünya Sağlık Örgütü
ECTS	: European Credit Accumulation and Transfer System
ERT	: Emergency Remote Teaching
HyFlex	: Hybrid Flexible
LMS	: Learning Management Systems
MERS-CoV	: Middle East Respiratory Syndrome Coronavirus
MR	: Mixed Reality
SARS-CoV-2	: Severe Acute Respiratory Syndrome Coronavirus 2
SPSS	: Statistical Package for the Social Sciences
UNESCO	: United Nations Educational, Scientific and Cultural Organization
USA	: United States of America
VR	: Virtual Reality
WHO	: World Health Organization
XR	: Extended Reality
YÖK	: Yükseköğretim Kurulu

CHAPTER I

INTRODUCTION

Architecture is a field with a multidisciplinary structure, therefore its borders are ambiguous and it changes depending on the era it is practiced in (D'Souza 2007). This difference stems from the fact that the profession of architecture is both a positive science and an art form (Al Şensoy and Özdemir Işık 2018: 78). Interior architecture and architecture education focuses on providing students with technical knowledge and engineering skills, while at the same time developing their creativity and aesthetic sense. It prepares students for professional life with applied studies and interdisciplinary approaches. Interior Architecture is not just a discipline that includes building interior design, but also aims to create environmentally sensitive, functional and aesthetic living spaces that improve the quality of life of people. Architectural education offers students opportunities to develop design thinking and interact with different disciplines as well as technical knowledge. Interior architecture is a discipline that focuses on people's lifestyles, needs and expectations in design processes, and the basic design factor is human. For this reason, interior architecture education has to adapt to constantly changing and evolving social, cultural and technological trends.

In the 21st century, global diseases and the increasing influence of technology on daily life have brought about compelling changes in many areas, including education. The global outbreak of COVID-19 has also led to fundamental changes in the way individuals acquire and learn knowledge. Because the illness is global and the spread is uncontrollable, incorporating technology into schooling has become imperative. Depending on the intensity of the pandemic, changing demands and habits of instructors and students have resulted in the upgrading of education systems and the deployment of new education models. Online learning has become the new norm, and educational institutions have had to adapt quickly to ensure continuity of education. This shift has also highlighted the need for equitable access to technology and internet connectivity for all students. As a result of the COVID-19 epidemic and the shift to

distant learning, many solutions have emerged for various institution types. While research done during face-to-face education periods found no discernible variation in technology usage between institution types (Kuzgun and Özdinç 2017: 97), in the distance education process, it is estimated that there are differences between technology usage levels depending on the infrastructure features of countries, cities, and institutions.

This research examines the changing education models in universities during the COVID-19 period. Educational models that have changed due to factors such as the effects of the pandemic and the increase in vaccination have caused differences in many areas such as the functioning of the courses in interior architecture education and the change in the equipment used. During the pandemic period, five education models were experienced. These are chronological order; old face-to-face education, emergency remote education, distance education, hybrid education and new face-to-face education models. These five educational models mentioned in the research are also valid for interior architecture education and the effects of these processes on Çankaya University Interior Architecture Department are examined. When the literature is reviewed, it is seen that different education models are generally handled as a single model or some education models are compared with each other, but the five education models applied during the pandemic period have not been examined in a single study. Since this gap has been identified in the literature, this thesis aims to provide a different perspective to the literature by comprehensively comparing the five training models from various perspectives. Therefore, in addition to its potential to contribute to the literature, this research has the potential to enrich the existing knowledge on educational models and shed light on the identification of new educational strategies in the field of interior architecture.

1.1. AIM AND SCOPE OF THE STUDY

Education in the COVID-19 pandemic has led to the implementation of different education models in order to adapt to the changing dimensions of the pandemic day by day. Old face-to-face education, emergency remote education, distance education, hybrid education and new face-to-face education models were implemented in chronological order throughout the pandemic. This research aims to focus on the effects of the COVID-19 pandemic, which has caused major problems globally, on interior architecture education and the changes it has caused. The general

aim of the study is to determine the positive and negative aspects of five different education models (old face-to-face, emergency remote, distance, hybrid and new face-to-face education) that interior architecture students have experienced during and after the pandemic, and to recommend the application of the positive aspects of these five models in new face-to-face education.

For this purpose, the effects of the pandemic on interior architecture education and practice were examined in detail by survey method by students studying at Çankaya University, Department of Interior Architecture. The focus of the research was limited to the "Design Studio" courses in the undergraduate curriculum and within the scope of applied courses.

1.2. HYPOTHESIS, OBJECTIVES AND RESEARCH QUESTIONS

The hypothesis of the study is; 'Due to the COVID-19 pandemic, changes have occurred in Çankaya University Department of Interior Architecture education as well as worldwide.'

This situation has brought about changes in the way the courses are taught, especially the duration of the design course and the tools used to access this course. The general objectives of this thesis are as follows:

1. To measure the level of adaptation of 4th grade students to the distance studio education, which has temporarily replaced the physical design studio (old and new face-to-face) in the changing interior architecture education after COVID-19 pandemic.
2. To determine what kind of changes each education model has brought to the design studio during the pandemic process.
3. To determine that the five education models applied before, during and after the pandemic have features for students to receive a more efficient, understandable and more successful education.
4. To measure the contribution and utilization levels of new techniques and technologies developed for students during emergency remote education and distance education.

To achieve these goals, answers to the following questions were sought within the scope of this study:

RQ1: How did COVID-19 affect the educational life in the Department of Interior Architecture at Çankaya University?

RQ2: How has COVID-19 created a change in design studio education in the Department of Interior Architecture at Çankaya University?

RQ3: What will be the new needs in interior architecture education at Çankaya University after COVID-19?

A gap in the literature was found when national and international resources were examined, and it was felt that more research should be done on the subject. When the relevant researches from 2020, the beginning of the pandemic, to 2023 were reviewed, it was seen that the studies generally focused on a single education model and covered a certain period, or two education models were compared with each other. In the literature review, no study was found that examined the views on all five different education models that changed according to the severity of the epidemic during the COVID-19 pandemic period. For this reason, it is thought that this research will shed light on interior architecture department academicians, students and researchers.

1.3. METHODS

Five education models employed during the COVID-19 outbreak will be explored within the boundaries of the thesis within the framework of Çankaya University Interior Architecture Department Design Studio courses. Both qualitative and quantitative research methodologies were used to conduct this research. Qualitative research, which constitutes the first step of the thesis, involves a detailed examination of the parameters related to the subject rather than measurement. With this method, it is tried to analyze why and how the relationship between the parameters is established. Qualitative research method is a method that does not involve numerical data and involves researchers' detailed description and textual analysis of the subject (Tümen Akyıldız and Ahmed 2021: 2). At this stage, content analysis was conducted by reviewing the national and international literature on educational models and investigating the curriculum of Çankaya University Department of Interior Architecture and the course operation of design studios. In the research, the problem and sub-problems were analyzed as dependent variables and other variables affecting these problems were analyzed as independent variables. In order to understand the effects of the pandemic on educational models, the dependent variable at the center of the study is the main measure reflecting this change. This dependent variable represents the transformation of the educational models implemented during the

pandemic period. In order to understand this fundamental question, a number of independent variables were considered. Factors such as; innovation, technological infrastructure, education techniques, communication, efficiency, task performance, social and cultural inequalities, time and money management, challenges and experiences were considered and analyzed as factors contributing to the transformation of educational models. The second step of the study, quantitative research, focuses on the existence and strength of the relationship between the variables based on measurement. The outcomes of this strategy are based on numerical data and statistical analysis. Thus, the components studied, as well as the interaction rates between these elements, are exposed and interpreted (The University of Arizona 2023). In short, the interaction between the education models examined and the factors that directly or indirectly affect education was interpreted. Within the scope of the research, the selected subject group and the design studio environment were first observed. As a result of the data obtained from the qualitative research and the observations made, firstly a semi-structured questionnaire was prepared. The data obtained from this questionnaire was examined comprehensively, and the answers given by the participants were analyzed as numerical data through the Excel program. Secondly, a structured questionnaire was prepared and applied. The answers to this questionnaire were analyzed statistically and the findings were supported with graphs.

In the research, a qualitative research approach called data collection was predominantly used to conduct a literature review. In this method, for domestic theses, the "CoHE National Thesis Center", "Scopus", "Springer" and "ScienceDirect" databases were used to reach domestic and foreign-written digital resources. Periodicals, articles, conference proceedings, and internet resources explaining the relevant titles have been used because it is an up-to-date research topic. At this point, the research matrix was used to examine the relevant materials in detail and to include them in the thesis where appropriate. Study; it has been designed with a pyramid logic that continues by articulating from the general to the specific. Concepts related to the determined study area have been customized using the keywords 'COVID-19 pandemic', 'Educational Models', 'Interior Architecture Education', 'Design Studio Concept' and 'Digitalization'. The databases were searched using these keywords, the useful resources were analyzed, and the research was carried out by grouping and limiting them according to certain frameworks. During the research, themes such as the advantages and disadvantages of the five education models experienced, new

technologies used and their effects on education, ensuring efficiency and continuity in education, technological inequalities, infrastructure problems, sociological and psychological factors were taken into consideration. These themes are discussed in the context of an academic research on the change of educational models. In the theme of advantages and disadvantages of educational models, it is about examining the positive and negative contributions of different educational models (e.g. distance education, new face-to-face education, hybrid education). The effects of each model on student achievement, effectiveness of education, student-instructor communication and student motivation were examined. New technologies and their impact on education deals with new technologies used in education (e.g. online learning applications) and their impact on education. It examines how emerging technology contributes to students' learning experience and transforms educational methods. In ensuring efficiency and continuity in education, it is investigated how to increase efficiency in education and ensure continuity of education. Issues such as the use of digital tools and the transmission of educational materials to students can be evaluated under this heading. Technological inequalities and infrastructure problems address technological inequalities and infrastructure problems. Issues such as technology access differences among students, internet connection problems, hardware deficiencies are examined under this heading. In sociological and psychological factors; it is about examining the effects of technology use in education on physical health. Issues such as students' adaptation processes to the digital world, how social interactions that take place face-to-face on campus change on online platforms, and the effects of digital learning on student motivation, adaptation and self-management skills were evaluated under this theme.

Archival research was conducted using the quantitative research method of the department's curriculum in order to better understand and convey the education of the Çankaya University Interior Architecture Department to the reader. Term/year, weekly course hours, ECTS (European Credit Accumulation and Transfer System) values, and durations were examined. Courses in the department consist of 4 years / 8 semesters and have been divided into 4 groups: applied, theoretical, elective, and common courses. In addition, by examining the classrooms and studios of Çankaya University's Department of Interior Architecture, area and research map analysis was carried out. The functioning of the 4th year course INAR 402 - Interior Design Studio-VI and the methods used in this course are analyzed.

The third section, which serves the basis of this study, includes survey's designs, method, participants, statistical analysis and primary empirical data. Two distinct surveys were given to the students at different times within the parameters of the thesis, utilizing the quantitative research approach. Before applying the questionnaire, permission was obtained from the Scientific Research and Publication Ethics Committee of Çankaya University. Students enrolled in Çankaya University's 4th Grade Interior Architecture Design Studio courses were subjected to two subjective data collection protocols. The subject group took INAR 402: Interior Design Studio - VI courses and experienced five education models, namely old face-to-face education, emergency remote education, hybrid education, distance education, and new face-to-face education, during the 2021–2022 education period. They were determined to be fourth-year Design Studio students.

The first questionnaire applied was of the phenomenological type; open-ended questions were asked, and a new questionnaire was prepared by determining the problems related to the subject. In order to obtain in-depth information about the distance education experiences of the students during the COVID-19 pandemic process and in line with the scope of the research, the phenomenology design, which is a qualitative research approach, was used. In this design, in which the data collection technique was mainly used, it was tried to understand how the students perceived the events and situations and what the essence of the perception was in order to collect more detailed information. The data obtained from this questionnaire was examined and analyzed in detail and a second questionnaire was prepared in the light of the findings obtained from the first questionnaire.

The second survey study consists of different question types on different scales. The questions asked within the scope of the questionnaire were prepared as open-ended, sequential, multiple-choice items using a Likert scale in accordance with its purpose. Parameters such as students' demographic information, technology and course satisfaction, physical and emotional disorders, and course quality were analyzed within the scope of five different education models. With the open-ended question asked at the last stage, it was tried to enlighten the students by asking which education model should be taught in the future. In the scope of the research, an attempt was made to establish a correlation between the two questionnaires and their scales. It is assumed that the students who participated in the survey within the scope of the research gave sincere answers to the questions in the measurement tools and presented

their own opinions and experiences in real terms. Research data were collected with an online questionnaire prepared with Google Forms software. Before the survey was applied, a pilot survey was conducted with 10 people who graduated from interior architecture departments of different universities. The intelligibility of the survey questions, the length of the survey, and its suggestions were evaluated. The survey results were analyzed and interpreted with SPSS management. All findings (such as survey, literature review, and archive scanning and data collection) were transferred to the thesis by considering and interpreting hypotheses and research questions. The fourth part of the thesis consists of main findings, data analysis, comparisons between training models, discussion and conclusions.

1.4. STRUCTURE OF THE THESIS

The thesis consists of five main chapters and each chapter is detailed with subheadings. In the first chapter, a general description of the thesis is presented to provide the reader with preliminary information about the purpose, scope, research questions, hypotheses and methods used.

In the second part of the thesis, detailed information about the COVID-19 pandemic and its global effects is presented and the historical background and functioning of the Interior Architecture department education is explained. Since the thesis is about Çankaya University Department of Interior Architecture, the curriculum analysis is also discussed in detail in this chapter. The importance and purpose of the Design Studios, which is the backbone of the Department of Interior Architecture and the course with the highest credits in the department, which is the limitation area of the thesis, is also conveyed to the reader in this chapter. The second and third chapters of the research constitute a large part of the literature and archive research of the thesis, and academic information on the subject is presented to the reader, supported by relevant graphics and visuals.

In the third part of the research, the effects of the COVID-19 pandemic on interior architecture education and the five educational models that changed during the pandemic are examined in detail. This section includes detailed information about the explanations, processes, advantages, disadvantages, difficulties encountered during implementation, and the practices experienced at Çankaya University and around the world regarding the five education models (old face-to-face, emergency remote,

distance, hybrid, and new face-to-face). This chapter is supported by tables containing comparisons between education models.

In the fourth part of the thesis, in line with the information obtained from the previous chapter, the data of the phenomenological and mixed questionnaires applied to Çankaya University Department of Interior Architecture students were meticulously analyzed and the results were comprehensively evaluated. These evaluations are presented to the reader using columnar and schematic graphs and tables for a better understanding of the subject. Interior architecture education models have been examined through questionnaires on considered parameters and the findings obtained are presented together with visual materials summarizing the subject, aiming to provide summary information to the literature. The results are presented with both text and related graphics, and the conclusions of the research and suggested points for future research are emphasized in detail.

In the final chapter, chapter five, the findings of the thesis are discussed in general terms and recommendations are made about the technologies and methods that should be used in the future.

CHAPTER II

COVID-19 PANDEMIC AND CHANGES IN INTERIOR ARCHITECTURE EDUCATION

Interior architecture is an art and science that brings together the functionality and aesthetics of the spaces where people live and work. Education in this field shapes the interior architects of the future and ensures that spaces are designed ergonomically, functionally and aesthetically. The COVID-19 pandemic has gone down in history as an extraordinary period experienced worldwide. This process has deeply affected many sectors and led to radical changes in every aspect of human life. Interior architecture education has also been affected by these changes. The COVID-19 pandemic has transformed interior architecture education and design studios, presenting new challenges and opportunities.

In this chapter, the historical background of interior architecture department education and training, detailed information about interior architecture design studios education and its importance will be presented to the reader, and the development of this field from past to present will be conveyed. In addition, information about the curriculum of Çankaya University Department of Interior Architecture is also presented. Since the changes created by the pandemic in education and how the interior architecture education world adapted to these changes according to the dimensions of the epidemic will be conveyed in the next section, this section conveys the literature research on interior architecture education and is a preliminary information on the subject.

2.1. COVID-19 PANDEMIC

Before starting to explain the main theme of the thesis, the COVID-19 pandemic; important terms used in the literature to express public health problems that differ depending on some parameters (geographic regions where communicable diseases occur, number of people infected with the patient, prevalence in the population) need to be explained. The concept of ‘endemic’, which is often confused

with ‘epidemic’ in the literature, essentially means the continuous presence of a disease in a certain geographical area or population group (Işık Abdulkadir 2021: 136). The concept of ‘epidemic’, on the other hand, is expressed as a higher-than-expected increase in cases of a disease in the population. Pandemic refers to the spread of an epidemic over a large geographical area and its rapid increase (Columbia University, Işık Abdulkadir 2021: 136). To briefly explain the concepts of endemic, epidemic and pandemic: endemic is the usual/habitual presence of a particular disease in a particular population. An epidemic can be defined as a particular disease that clearly exceeds its usual presence in a particular population. Pandemics, on the other hand, can be briefly expressed as epidemics affecting large populations around the world. With the COVID-19 "pandemic" process, it is apparent that a number of terminology connected to epidemics have begun to be used more frequently in the literature.

The word COVID-19; the CO of 'corona', the VI of 'virus' and the English word for disease are derived from the D of 'disease'. The number 19 represents the year 2019 (Sağlam 2022: 11). The coronavirus that causes COVID-19 infection is a member of a large family of viruses. The name coronavirus comes from the crown-like projections on this virus. The genesis of COVID-19, which is a coronavirus similar to SARS-CoV and MERS-CoV but is genetically distinct, remains unknown. It is thought to have originated in the Huanan Seafood Market (a wholesale fish and livestock market where different animal species are sold) in Wuhan, China, a metropolis of 11 million people (Zhou et al. 2020: 271). The disease is transmitted by droplets emitted from the upper respiratory tract (coughing and sneezing) and from surfaces touched by patients (contacting the eyes, mouth, and nasal mucosa with hands). These symptoms usually appear on the fifth day of the disease; however, in different cases it has been found to differ in a range from the second day to the fourteenth day. Although there is no definite data on how long people have been carriers; it has been observed that people who do not show any symptoms also spread the virus (Turkish Ministry of Health 2020). Fever, cough, and shortness of breath are symptoms that aid in the diagnosis of the condition. Pneumonia, severe respiratory failure, renal failure, and death may occur in extreme instances. Although it has been reported that there may be asymptomatic cases, their rate is unknown (Turkish Ministry of Health 2020). Although coronaviruses (CoV) are recognized as a family of RNA viruses that often induce symptoms similar to a common cold in humans, SARS-CoV and MERS-CoV, both members of the same family, have shown that this family of viruses may cause more

serious illnesses (Budak and Korkmaz 2020: 65). Researches made; 80% of the cases survived the disease in a way that did not require serious medical intervention; however, in severe cases, the disease can turn into pneumonia and artificial respiration methods may be needed (Budak and Korkmaz 2020: 65). Rest at home, antipyretic measures and fluid intake are important for those who have a mild illness. One out of every five people in contact with the disease has a severe illness. The most effective way to be protected from the disease is to wear a mask, pay attention to hand hygiene, maintain social distance (at least 1 meter) and be vaccinated.

The COVID-19 pandemic, also known as the coronavirus pandemic, is a virus outbreak that began on November 17, 2019 in Wuhan, China, the capital of the Hubei region. On December 31, 2019, the World Health Organization reported cases of pneumonia of unknown etiology in the city of Wuhan and on January 5, 2020, a new coronavirus that was not previously recognized in humans was observed. First identified as 2019-nCoV, this disease was later named COVID-19 and spread all over the world just three months after it first appeared in China (World Health Organization 2020). After it was discovered that the virus was linked to SARS-CoV, the Coronavirus Research Group (CSG) of the International Council for the classification of viruses named it COVID-19 on February 2020 (Gorbalenya et al. 2020: 6; Lauxmann et al. 2020: 1). The World Health Organization (WHO) declared it a global epidemic on March 11, 2020, because it’s a disease that develops for no apparent reason in different patients, doesn’t respond to treatment or vaccines and is easily transmitted from person to person (World Health Organization 2023). It was announced on March 13, 2020, that Europe has now become the epicenter of the coronavirus crisis. Governments found themselves in a crisis as a result of the global spread of the COVID-19 epidemic and worked to find quick solutions. As stated in the data sheet published by the Ministry of Health of the Republic of Turkey and updated daily; the first COVID-19 case in Turkey was detected on March 11, 2020 (Turkish Ministry of Health 2020). The COVID-19 Epidemic has had long and short-term repercussions on many aspects of people's life, creating negative consequences on topics like as health, economics, and education, as well as damage to nations' private and public sectors (Balcı 2020: 76). Aside from the negative effects experienced in the social and service sectors, the COVID-19 pandemic also impacted declines in the tourism, aviation, agriculture, and financial industries, which are the countries' primary sources of income, and caused a significant decrease in both supply and demand

(Sağlam 2022: 31). Many countries in the world had to take strict measures in order to reduce the number of cases and control the spread of the epidemic. The rule of interpersonal distance, isolation and the prohibition of travel between countries / cities have led to a decrease in work efficiency and layoffs in all service areas, in this case employment problems, schools have been closed, and the demand for consumables used in these sectors has decreased. In summary, the COVID-19 pandemic has had a global and far-reaching impact.

The pandemic was attempted to be brought under control with the COVID-19 vaccine, and the first vaccination application in Turkey in this regard began in January 2021. This process was expected to cease with the introduction of the vaccine, but variations of the virus evolved during the process, affecting the entire world. Viruses are born with the potential to mutate and produce variations. A mutation is a change in the genetic sequence. Variants are genomes that differ in genetic sequence from one another (Vasireddy et al. 2021: 317). Variants can be distinguished from one another by one or more mutations. When phenotypic differences across variations are observed, they are referred to as strains (Lauring and Hodcroft 2021: 529). With the increase in the number of cases, viruses constantly mutate and new variants of the virus emerge over time. Sometimes new variants disappear over time. Sometimes these new variants develop and continue to exist.

The young adulthood period that university students are in requires them to adapt so many changes. Today, the COVID-19 pandemic increases academic stressors due to uncertainties and delays in educational activities in university students, making it compulsory for students to get used to and adapt to a new process very quickly. Studies reveal that university students feel psychological distress (distress) and sleep problems due to the COVID-19 pandemic. While anxiety, depression and stress increase sleep problems, chronic insomnia can also trigger psychological distress (Grubic et al. 2020: 517). Therefore, the COVID-19 pandemic has directly affected the normal learning and focusing process of university students. In addition, it is stated that university students' gaining a constructive and positive attitude in solving the problems they encounter helps them overcome the pandemic process more easily (Kara 2021: 36). Human is a social being and individuals feel the need to communicate. Researches show that students experience psychological problems when they stay away from sportive, artistic and various social activities while continuing distance education (Tokgöz 2021: 5). As a result of the closure of schools,

it is seen that at least one third of the students experience lack of connection and device problems in the process of adapting to distance education. Accordingly, it is possible to say that the COVID-19 epidemic, which has disrupted education systems on a global scale, exacerbated the pre-existing education crisis and increased inequalities. Education must continue all over the world, regardless of the circumstances. It is of great importance for educational institutions to be prepared for new pandemics or disasters (such as earthquakes, floods, fires) that may occur in the future.

2.2. INTERIOR ARCHITECTURE EDUCATION

Education is defined as the process of acquiring knowledge, skills, and behaviors necessary for future generations to participate in social life effectively and to be raised in a qualified manner. It is a critical element in building a strong society, as one of its fundamental purposes is to transfer the cultural accumulation of society to individuals and prepare them for life. There are various definitions of education in the literature, but broadly speaking, it is seen as a purposeful and planned behavioral change process that occurs through an individual's activities (Erdem 2005).

According to (Arayıcı 2011: 450) education encompasses all procedures that enable individuals to make informed decisions using scientific techniques, possess theoretical knowledge, and remain open to acquiring new information, while also developing them into specialized professionals. It is a moral investment that people can use the knowledge and skills they have acquired during their education for the benefit of themselves or the society after the education process. Vocational education plays a crucial role in producing qualified professionals, fostering social benefits, and advancing the development of a country. As the occupations of today continuously transform due to technological, social, economic, and cultural factors, it is essential to update educational content and approaches to ensure vocational qualifications remain relevant and the professional culture continues to evolve. The profession of interior architecture stands out as a profession that is in constant interaction with social culture and technological developments, focusing on the built environment and people (Eyüpoğlu and Büyükçam 2022: 278).

Interior architecture education is divided into theoretical and applied education. The general aim of these courses is to teach systematic thinking. Theoretical and applied course models; show a different distribution in each university according to the education year of the students and the coordination of the courses given at the

school. Theoretical education is about the process of enlightening the individual through knowledge. In applied education, the aim is; making the students combine and experience knowledge they have taken in theoretical courses. In addition to academic and professional knowledge, the main aim of interior architecture education is to instill in each student such characteristics as originality and creativity, as well as the capacity to evaluate problems from a broader perspective (Gülel 2018: 9). Today, communication and information technologies are applied in numerous industries, including education. In addition to conventional design studio activities, new initiatives at design education have been made at design learning institutions (Sakarya 2019: 388). While traditional Interior Architecture education takes the form of face-to-face and interactive work between the instructor and the student, the increasing use of digital technology has begun to assist the existing conventional techniques. Interior architecture education teaches rapid, aesthetic, and reasonable decision-making processes in the face of fundamental necessities, as well as activities that create thinking patterns for the growth of creativity. The interior architect applicant is required to put these approaches into effect by teaching him how to think about an issue and how to approach it. Expected outcomes from interior architecture education occur when the student tries to use professional theoretical knowledge gained via theoretical education in design education that promotes his creativity potential (Gülel 2018: 10). Combining design with theory, communication, psychology and technology will contribute to students in many ways.

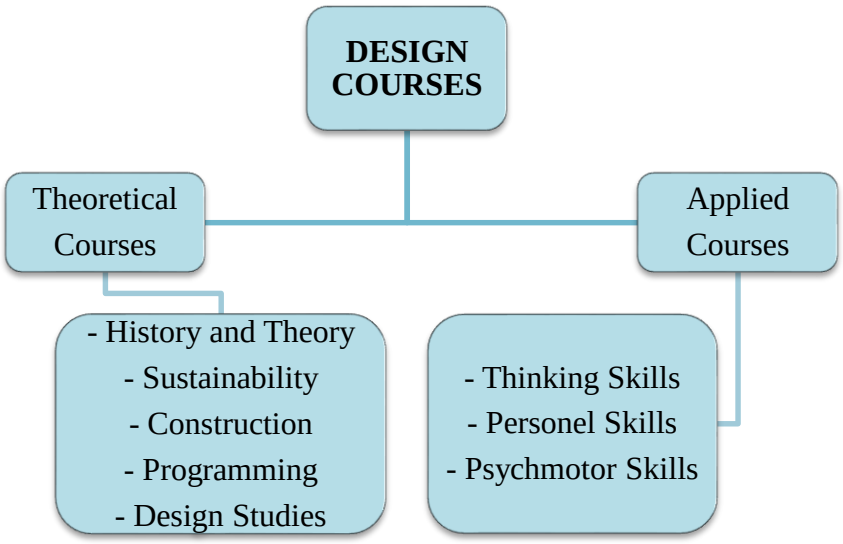


Figure 2.1: Interior architecture education curriculum analyses (Ghonim and Eweda 2018: 237)

The most important applied courses in the interior architecture department are the design studios. Basic design studios are where students learn the basics of interior design education and the interior design profession. The lack of infrastructure to prepare students for this process prior to architectural education is the first of many challenges that students will face during their education (Dikmen 2011: 1512). Concept of design studio; it also refers to the design process and productivity as well as a passive environment where education and training experiences take place. This process; includes communication and interaction between individuals, creativity, learning methods, versatile thinking and production, and innovations that have developed their originality. In the first year design studios, mostly abstract working and design principles are tried to be transferred to the students. It is the process of transferring ideas and projects from abstract to concrete by 2nd grade students. In the 3rd and 4th grades, they learn to design interior architecture projects in a more detailed and realistic way with computer aided programs. It covers the maximum amount of time among other courses, 8-10 hours in the weekly course program. Design studios can be defined as the reflection of all the knowledge taken from theoretical courses to the projects in practice.

The most crucial resources for a course to advance consistently are the syllabi, which are sent to students at the start of each academic semester. Also, they help students stay with the process by providing information on the studio guidelines, weekly schedule or map of the course, course materials, and exam weeks. In order to explain the new educational formation, methods, and process planning to the students during the shift to online education, various adjustments to the curricula have been made. Despite the fact that architectural design studios do not advance according to a weekly theme structure like other courses do, it is crucial for students to understand what is expected of them in weekly submissions. Under this situation, the syllabuses for design studios have had their general structure and content revised in accordance with the online education system (Ceylan et al. 2020). The functioning and importance of the design studios course, which is the highest credit course of the interior architecture department, covers all theoretical and practical courses and is the backbone of the interior architecture department, will be explained in detail in a sub-section.

2.2.1. Çankaya University Curriculum Analysis

The Department of Interior Architecture at Çankaya University was established in 1999. The structure and content of the departmental curriculum were revised and took their final form in 2017. The undergraduate education of the Department of Interior Architecture consists of 4 years / 8 semesters, and the students graduate by doing two internships (Çankaya University 2022). Examining the department curriculum reveals that there are 54 different courses included. These are divided into theoretical, applied and common courses. Among these 54 courses, 10 are designed as elective courses, while the remaining 44 are structured as required courses. There are also 2 compulsory internships in the department, namely construction site and architectural office internship. There are 35 theoretical and practical courses offered by the department that must be taken in order to graduate. These courses are structured within the scope of five different fields: 1. Design - 2. Construction - 3. Building Physics - 4. History, Theory, Criticism - 5. Graphical Communication Techniques (Urak et al. 2021: 91).

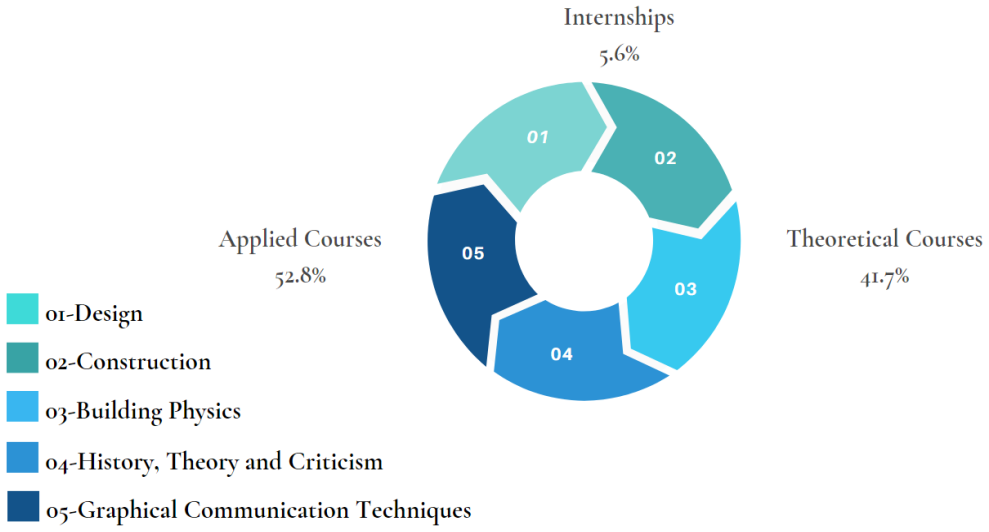


Figure 2.2: Distribution graph of theoretical and practical courses in the Çankaya University

In addition, there are 7 compulsory courses coordinated by the Common Courses Unit and the Occupational Health and Safety Department. These; Turkish (I and II), Atatürk's Principles and History of the Revolution (I and II), English (I and II) and Geometry for Architects and 2 Occupational Health and Safety courses. Students must earn a minimum of 240 ECTS (European Credit Transfer System) credits to graduate from the Department of Interior Architecture under the guidelines of the

Bologna system equivalent implemented in 2010. Department education was designed to be formal and face-to-face, and it has remained thus for the last 11 years.

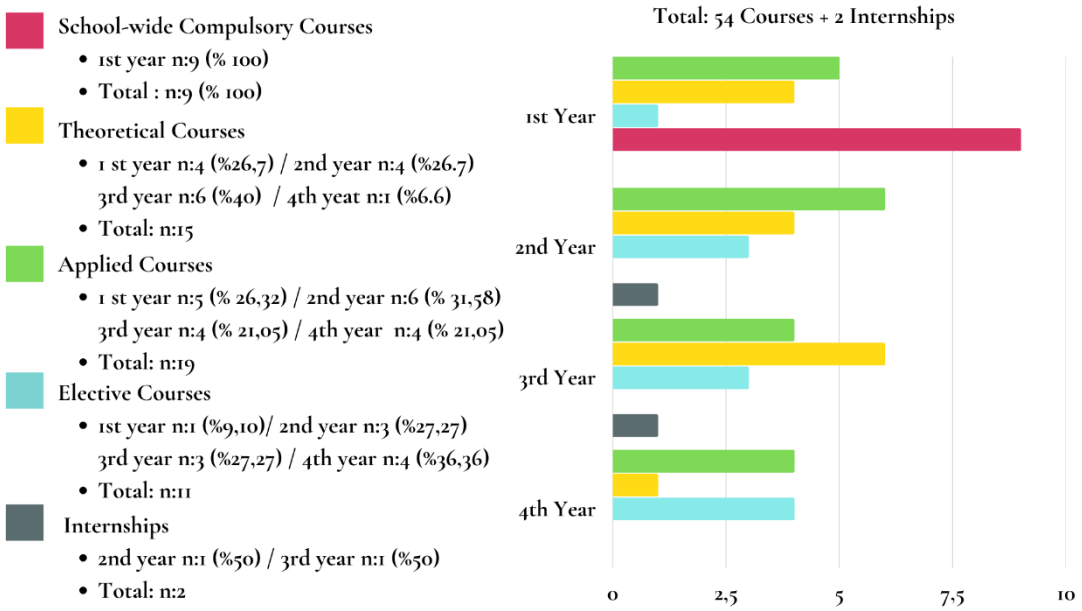


Figure 2.3: Çankaya University Interior Architecture department curriculum and division according to fields

2.3.DESIGN STUDIO EDUCATION IN INTERIOR ARCHITECTURE

One of the essential subjects in design education is design studios and their culture (Hacıhasanoğlu 2019). Architectural education is given in project-design studios where students and instructors are physically together and interact with each other (Ioannou 2015). The design studio's goal is to help students generate design concepts and material based on analysis and critical synthesis (Hassanpour and Pasaoglulari Sahin 2021). Studios are anonymous spaces that belong to everyone, where students spend most of their time in the education process, and that they use for different learning activities in certain periods of time, as required by architecture programs (Dinç 2007: 838). Design education involves a system of visual thought and an organizational approach that channels creativity towards practical ends. Its aim is to arrive at solutions by forging links between elements such as materials, concepts, and instincts, whether in two-dimensional surfaces or within three-dimensional spaces. This process is guided by a variety of principles, including rhythm, direction, proportion, and equilibrium, which stem from our overall perception of aesthetics and harmony (Kahraman 2020: 49). The first year of design education is a very risky, stressful and important year. Teaching basic design elements and principles to first

year students is of great importance for their future design and professional success (Öztuna 2007: 10).

Many universities have established the design studio classes, which are the most important part of the interior architecture education, as a total of eight courses with one project per semester. During the school curriculum, these studio classes are supplemented with theoretical courses on history, theory, criticism, building physics and technologies, media, environment, city, and society (Ceylan et al. 2020). Design studios are included in the interior architecture design education curriculum as a social learning environment in which students interact one-on-one with instructors and their classmates (Ahmad et al. 2020: 164). Basic Design courses are offered in the first year of design studio courses. These courses are intended to introduce students to the fundamental principles they will encounter in the field of design while also developing critical thinking and problem-solving abilities through two and three-dimensional design issues. At this stage, the basic design principles are explained to the students both by lectures and by giving criticisms on the models and project studies requested by the instructors. Contrast, balance, emphasis, proportion, hierarchy, repetition, rhythm, pattern, white space, movement, variety, and unity are the 12 basic design principles. The main purpose of teaching design principles is to improve students' process of perceiving and interacting with a design. Basic Design-1 and Basic Design-2 courses' content is intended to serve as an introduction to design in this way. Starting from the second year, students are expected to design interior architecture by integrating the principles they learned in the basic design course into architectural projects. In the architectural education process, the student is expected to define the design problem requested from the student, to find new solution proposals and to make an original design, starting from the 1st semester, in each semester's curriculum and increasing complexity. The process, which started with projects with smaller scales and less details in the second grade, continues until the fourth grade, with the project area getting bigger. In each studio course, students are expected to produce original solutions to architectural problems of different scales by using the knowledge and skills they have acquired during their architectural studies. In the second year, students continue their education by doing architectural design studies mainly with two-dimensional drawing programs and also by starting to use three-dimensional drawing programs. In this process, they are asked to make models so that they can perceive the space more clearly. In the third and fourth design studios, professional architectural

technical solutions, details, rational designs, use of the right materials in the right place, realistic renderings and animations are expected. The importance of theoretical and applied design courses aimed at equipping students with design and creativity abilities is relatively high in interior architecture education programs, just like it is in the education programs of other disciplines requiring design and creativity. Including basic design studios, students take a total of eight design studio courses until they graduate.

In interior architecture education, design courses are given in spaces defined as studios, by the instructor at the desk, individually criticizing the product designed by the student, or collectively on a sheet. Because; studios are social spaces for student-student communication and interaction as well as between the student and the instructor. By listening to the comments made on their friends' projects in group criticism, students can more easily notice the missing or wrong places in their own projects and revise them without telling the instructor. In addition, students and course instructors can interpret a project together at some times within the scope of the course. Such interactions positively increase the communication within the studio. The general purpose of design studios includes how the design action should be carried out in interior architecture, the stages of design, the development of the students' thinking, designing, presenting and interpretation skills in an original way, and the transformation of the theoretical knowledge given in the theoretical courses by supporting them with two- and three-dimensional designs.

In interior design studio, students reflect what they learn in theoretical courses and other practice-based coursed on their design solutions / design development process. Students; design projects by considering many factors such as design principles and elements, construction techniques, color theory, space planning, materials and coatings, lighting, acoustics and furniture design. They also perform project designs using computer aided design (CAD) software and other design tools commonly used in the industry (such as AutoCAD, 3dsMax, Rhinoceros, Blender, Revit, Solidworks, SketchUp). A quality interior design studio education should provide students with a solid foundation in design principles and many practical skills and opportunities to apply these skills in their professional setting. Design studios are often structured around a collaborative, interdisciplinary approach that seeks to reflect the professional design process. Students also have the opportunity to create a portfolio of their work during their studies, which can be used after graduation to showcase their

design skills to potential employers. Interior architecture students take a design studio course every semester for 4 years / 8 semesters. First year students start their interior architecture studio education by taking "Basic Design - 1 and Basic Design - 2" courses for the first time. In basic design principles and elements students learn both theoretically and practically. Within the scope of the course, they explore how these principles can be used to create effective and aesthetically correct designs, together with models, drawings, critics and interviews. Design studios are the backbone of interior architecture. Starting from the 2nd grade, they learn to plan space and to design an area in the most useful way within the scope of the course. They perform space designs by considering many factors such as circulation within the space, size, functionality and accessibility, and special designs for the disabled. The materials and coatings used in the space are of great importance in terms of design, as well as the technically correct design of the space. Students learn by researching different materials and finishing that can be used in interior design, such as wood, stone, metal, glass, ceramics, parquet and fabric, by using them in their projects, by drawing their details, and by experiencing. Within the scope of the course, with the support of the instructors, they discover how to select and combine these materials in order to achieve the desired look and feeling in the project. In addition, they try to produce designs that include modularity, which makes fixed and movable furniture both functionally and aesthetically pleasing. One of the elements that increase or decrease the quality of space in terms of its functionality and aesthetical concerns is efficient design of lighting in space. Lighting is an important element of interior design as it can positively or negatively affect the spirit and atmosphere of a place or even a person. Within the scope of the course, students learn the types of natural and artificial lighting, the temperature and intensity of the light, how to choose the right luminaires and how to create different lighting effects. Although interior architecture course includes interior design, facade designs of projects are also discussed in design studios. Students both learn about exterior materials and coatings and make aesthetic facade designs, as well as design the arrangement of the landscape areas of the project. In addition to design skills, students also learn about the commercial and professional aspects of interior architecture. The criticisms received are actually like the usual dialogue of the customer - interior designer relationship. While students try to please their instructors with their projects, instructors try to contribute positively to the projects by revising them. This situation also improves the persuasion skills of the students. In an interior

design studio training, visual presentation and studio criticism are critical components of the learning experience. Visual presentation refers to the process of creating visual representations of design concepts and ideas. This may include sketches, technical drawings, computer-generated images, and physical models. Visual presentation skills are always essential for communicating design ideas to clients, colleagues and other stakeholders. In the design studio, students also show individual development in various visual and architectural presentation techniques in general. They learn how to create accurate and detailed drawings and models and how to use computer aided design (CAD) software to create 2D and 3D views of their designs. In addition, they apply different presentation techniques such as mood board, which can help to show the design concepts and the materials they use effectively, within the scope of the training. Studio reviews are another important aspect of an interior design studio training. Studio criticism is a group review of a student's work in which the student presents their design ideas to a group of instructors and peers for feedback and discussion. The critique process is designed to help students develop their critical thinking and communication skills and to encourage them to reflect on design concepts. During a studio review, students will receive feedback on their design ideas, presentation skills, and problem-solving skills. They will also have the opportunity to discuss their work with other students and learn from their peers. In general, visual presentation and studio criticism are essential components of an interior design studio training. By developing strong visual presentation skills and participating in regular criticism, students can gain the knowledge and skills they need to succeed in interior architecture and design. Overall, a comprehensive interior design studio training provides students with a strong foundation in architectural design principles and practical skills, while providing the ability to properly apply these skills in their professional setting.

Examining the notion developed during the cognitive process and reinterpreting these ideas using different methods such as perspective architectural drawings, presentation papers, 2D/3D computer presentations, digital or freehand sketches, models, concept development, and execution, the design is achieved (Dikmen 2011: 1514). In the education in the design studio, the student is expected to develop a concept and design idea for a space or project. Simultaneously, student is asked to do research about the design problem he is addressing from written or digital sources and to deal with the subject in a multi-faceted way. After the student finishes

these analyses, they begin to consider the space architecturally. For this, the student first starts to develop a concept with sketches by using computer hardware or traditional presentation methods and sharing information with the instructor. The concept can sometimes also emerge and evolve during the design development phase. Afterwards, the student starts to design and present the space in accordance with the scale with 2 or 3 dimensional drawings and models. Information is not supplied to students directly in the design studio. It is required to bring together knowledge gained through theoretical courses and real experiences. Students; he/she improves the basis on which his/her design ideas are founded with the models and sketches he created in response to academic criticism. This method, which begins with a sketch, is followed by 2D and 3D drawings. With 2D technical drawings, plan, section, view, and detail drawings, how to approach the project is specified. Three dimensions are offered in the language of expression with the use of computer programs or hand perspective. Detailed final decisions such as material, texture, color, and lighting are expressed in these drawings.

Alternatives offered by the digital world; provided the use of computer-generated drawings and designs. Programs created with vector software; save both time and effort while preparing and presenting architectural drawings. As a result, the designer's narrative techniques become richer with realistic three-dimensional visuals and easy-to-create alternatives (Zeng 2006). With digitalization; presentation sheets and models, architectural drawings and perspectives, and three-dimensional modelling drawings are exhibited. Digital tools are used efficiently throughout the process and in the preparation of the presentation. Digital technologies produce faster and more efficient results than traditional methods (Akdağ and Tok 2008). Gains in labor, time savings, and precise work are made possible by computer-aided drawing systems. In addition, projects and items that are difficult to define and accomplish using two-dimensional drawing methods may be simply generated using computer-aided 3D software and printers. In many aspects, computer-aided drafting applications help in the creation of architectural projects (Güngör 2015). Computer programs may generate, alter, duplicate, and prepare drawings to represent thoughts. These programs enable interactive relationships to be built between projects and audiences (Söğüt 2019: 68).

2.3.1. The Purpose of the Design Studio and Its Importance in Interior Architecture

Space design education, unlike other disciplines, is a one-of-a-kind approach that combines art and science and is centered on a design studio (Atakan 2019). Despite the fact that there are many different definitions of what a design studio is, the studio essentially relates to two different concepts. These are the core pedagogical unit and approach of design education, as well as a physical learning environment. The studio is a place where students, who are aspiring designers, work individually or in groups to solve design challenges by trial and error, interacting with the studio executive while doing so, and learning to design. Design studios and studio pedagogy have been fundamental to art and design education for over two centuries, with general characteristics associated with Ecole des Beaux Arts ateliers and a relatively modern Bauhaus studio model (Broadfoot and Bennett 2003: 1). The design studio, which became a part of formal architecture education with Beaux-Arts in the 19th century, is now the backbone of architectural design education as a location to study creative activity (Cantürk Akyıldız 2020: 391). Within the master-apprentice relationship, the design studio provides both theoretical and practical knowledge transmission at educational institutions (Gülel 2018: 13). Interior architect candidates are taught a new language in the design studio. Students learn how to communicate themselves through presenting, visual, and sketching approaches. To convey their views, they study and employ professional language and idioms, as well as visual language. It is given the opportunity to learn through interacting with the visual and verbal expressions that make up the entire professional language (Gülel 2018: 31). In his article (Wang 2010), he emphasizes the vital mix of factors such as emotionality, creativity and social collaboration of concrete presentations for design studios and the idea that important designs can evolve by allowing for ambiguity.

The design studio is a place where a student may create a universe that is distinct from the physical world and that is commensurate with his imagination. It doesn't have to match the physical environment's qualities. The learner has complete freedom, but he must consider the causes, options, and repercussions of the world students' creates. In the design studio, unlike traditional education, development is provided by learning by experience, is applied. The design studio gains importance as a place that not only informs the student, but also accustoms them to find the way of

behavior in life, and gives the habit of thinking and originality for this purpose (Arıdağ and Aslan 2012: 50).

Undergrad level architecture university courses are still rare online, and the main reason appears to be that the design studio culture does not yet fit into the distance education idea. The cause for this maladaptation is due to the design studio's unique qualities, such as peer contact and collaborative work, quick feedback based on one-on-one critiques from instructors, and spatial characteristics of the studio setting (İlter 2023: 22).

Experts share the view that the COVID-19 pandemic, the biggest health crisis in the world today, has created an opportunity to restructure the education system (Mineo 2020). Efficiency and continuity in education are recognized as two main factors of importance. Providing the necessary physical, material and technological conditions is of great importance for a qualified education process.

In today's world where technology is developing rapidly, education is also under the influence of transformation. One of the most prominent examples of this transformation is distance education. Especially the COVID-19 pandemic process has further increased the demand and need for distance education. While this new education model offers flexibility to students, it has also led academic institutions to adapt to new technologies. The pandemic has further deepened the inequality in access to and use of Information Communication Technologies (ICTs), the "digital divide", especially in underdeveloped countries and among individuals of different socio-economic levels (Arık 2020). Students with limited financial means and academic institutions that do not have sufficient technological infrastructure have encountered difficulties in accessing distance education, such as hardware deficiencies and internet problems. In addition, the lack of technological knowledge of the staff in academic institutions is another problem. For these reasons, the distance education process has been a period in which individuals have tried to adapt more to technology, and now this technology is also evident in face-to-face education. The view that digital education opportunities used as a tool in the pandemic process can be a supporter of formal education rather than an alternative to face-to-face education is also voiced. Especially in fields such as interior architecture, workshops are of great importance to improve students' design skills. Today, 3D modeling tools and simulations offered with virtual technology support the rapid development of projects by providing students with practical experience in both distance education and face-to-face

education. Therefore, instructors and students need to be technologically equipped. Especially for virtual technologies that are expected to be used in every field in the future, it is of great importance for educational institutions to provide training and guidance to their staff.

CHAPTER III
EDUCATIONAL MODELS

In today's world, the COVID-19 pandemic has deeply affected education as well as many sectors (Daniel 2020: 91). In this context, interior architecture education stands out as one of the fields affected by the pandemic. The pandemic has led to the use of new education models by changing the formal education that continued before 2020. The traditional face-to-face education model has been suspended for a while, and online education and hybrid learning models have become more widely used. This transformation has affected the learning processes of interior architecture students, course equipment and the functioning of design studios. This chapter will focus on the changes caused by the COVID-19 pandemic in interior architecture education and examine the transformations that occurred in education during the pandemic and the effects of these changes on interior architecture education.

Education is one of the fields most affected by the epidemic worldwide. As a result of the rapid spread of the pandemic, most countries started offering distance education instead of face to face education, depending on the epidemic conditions. After the announcement of the first COVID-19 case in Turkey on March 11, 2020, all institutions began to act urgently. In order not to disrupt the education-teaching process, new solutions were discussed and it was decided to switch to emergency remote education. On March 13, 2020, Advisory Committee on Epidemic was established in various provinces, educational measures in American and European countries were examined, and urgent information about the current state of distance education infrastructures and human resources were requested from universities (Saraç 2020a). It has been unusual as in all countries schools were closed before the opening date is known, and instructors, parents and students were faced with an unprecedented situation. In the epidemic process, which cannot be predicted, universities were suspended for three weeks on March 16, 2020, and emergency remote education started in some universities with the decision of the Council of Higher Education "Yüksek Öğretim Kurumu (YÖK)". As there was no improvement in the course of the

pandemic after three weeks, numerous limits were enforced to bring the pandemic under control. On March 23, 2020, a new statement was made by CoHE, and it was stated that face-to-face education cannot be continued under these conditions in 2019-2020 Spring semester and universities should start distance education (Özdoğan and Berkant 2020: 15). In line with the declaration of the pandemic in the world and the decision taken by the Council of Higher Education (CoHE), distance education has started in the 6th week of the spring semester in the universities that provide face-to-face education until 2020-2021 fall semester. After the decision taken in the last week of March 2020, every university prepared or not had to start distance education. Depending on the communication and information technologies that have developed in recent years, CoHE has conveyed the regulations determining the procedures and principles regarding distance education in the universities (Işık Nursen 2021: 28). In the implementation of distance (online) education in higher education institutions; 5 basic principles were taken into consideration under the titles of Legislation, Infrastructure, Human Resources, Content and Implementation (Saraç 2020a). Head of CoHE Prof. Dr. Yekta Saraç briefly summarized these concepts in his press release in March 2020; with the legislative arrangement, new revisions were made in the Distance Education Procedures and Principles, providing the opportunity to conduct distance education in all departments. Feedback from universities on infrastructure was evaluated by CoHE. It was seen that open and distance education applications in higher education institutions in our country have become widespread since 2009 in parallel with the developing legal regulations. In addition, Open and Distance Education Faculty applications have been carried out at Atatürk University and Istanbul University for many years, as well as Anadolu University (Telli Yamamoto and Altun 2020: 29). In the field of human resources, the experience of many universities was evaluated. The most important aspect of distance education is content production. With the onset of the pandemic, it has emerged that critical assistance is needed in the development and delivery of online course content at universities. Moreover, it was determined that the open course materials pool developed by other institutions would be extended to all universities for universities that did not have distance education alternatives, based on the circumstances of the day. It has been decided to use digital opportunities and distance education methods in the theoretical courses of the application-based programs. It has been decided by CoHE to give the practical courses at the most appropriate time, including the extension of the calendar

determined by the universities. In terms of practice, universities have been able to use synchronous or asynchronous distance education techniques in accordance with their own opportunities and the course content of the departments, despite the scenario produced by the pandemic and the unprepared environment. It was planned to conduct the theoretical courses with distance education, and to apply a compressed calendar program at the right time for practical studies. The exams to be held have been determined to be applied in time periods suitable for them, provided that the distance education program is followed. It has been ensured that graduate program proficiency exams, thesis monitoring committees and thesis defenses can be conducted, recorded and audited in a digital environment, provided that our universities provide the appropriate infrastructure (Saraç 2020a). During the COVID-19 pandemic process; a graphical summary including the dates of important developments, changing education models and the years and periods when they started to be implemented in universities is visually presented in Figure 3.1.

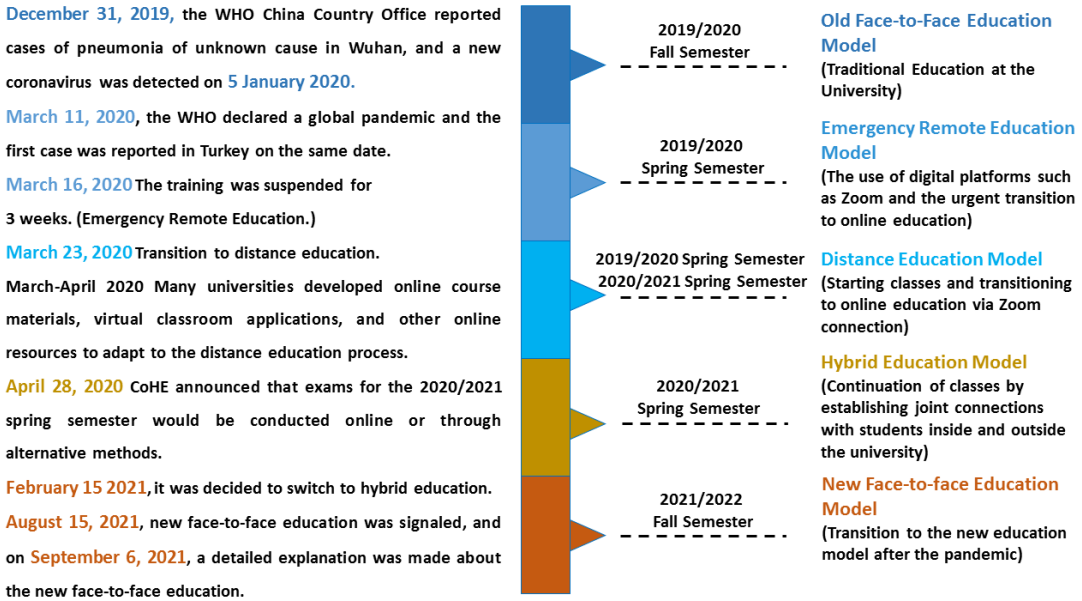


Figure 3.1: Important dates according to the level of the pandemic and changes in education models

The Spring Semester classes began on February 10, 2020, and students finished their five week education in normal classrooms before the educational facilities were temporarily shuttered due to the COVID-19 pandemic (Ceylan et al. 2020: 205). In the case of architecture students, the design project was conducted face-to-face and in

architectural studios as is customary. With the closure of educational institutions and the interruption of face-to-face education, the education of 1.5 billion students, which corresponds to approximately half of the student population from all education levels, has been interrupted (UNESCO 2020). The number of students affected by the interruption of education has reached approximately 25 million students in Turkey. CoHE's evaluation of the situation shows that 121 of 189 universities started their distance education operations on March 23, 2020, followed by 41 institutions on March 30, 2020, and 25 institutions on April 6, 2020 (Yurtsever et al. 2021: 58). Thus, universities have started education again as synchronous and asynchronous courses according to their own infrastructure. Due to the lack of preparation for this process, both academics and students experienced issues adjusting, and technological issues emerged as a result of the uneven access to computers and the internet (Güllü and Ölekli Bindal 2021: 2). In a press release announced in February 2021, it was decided to switch to hybrid education in universities due to the control of the number of cases. Hybrid education is an educational approach that combines formal schooling with a distance education system (Hasgül 2022). Some of the courses in this model were delivered face-to-face, while others were delivered online. Although face-to-face education is carried out using the formal education paradigm, distance education is expressed as video conference lectures between students and instructors. With the announcement made in September 2021, a new face-to-face education program started due to the decrease in the number of cases and the increase in vaccination in Turkey. The education of the interior architectural department has also changed as a result of the pandemic, and has experienced transformation and development in response to the epidemic's dimensions. The curriculum at the interior architecture department includes both applied and theoretical studies. After the 2019-2020 spring semester, it experienced five different education models, namely, the old face-to-face education; and then, respectively, emergency remote education, distance education, hybrid education, and new face-to-face education. The consequences of the pandemic were attempted to be minimized by making use of technological capabilities in department courses, where the applied course density is great and face-to-face communication is particularly crucial. To explain the education models in order; the old face-to-face education model is the traditional formal education model applied in schools before the 2019/2020 fall year. Students come to the lecture studios at the time determined by the university and receive training. This education is instructor-centered and carried

out face-to-face. As long as there is no CoHE decision, attendance to school is essential. Since student-instructor communication takes place mutually, lessons, feedback speed and interpersonal interaction are more efficient. Looking at the literature sources (AL-ayash and Hussein 2020; Balcı 2020; Ceylan et al. 2020; Sakarya 2019) it is seen that the research conducted in the 2019/2020 period, that is, at the beginning of the pandemic, is related to the transition from the face-to-face education model to the distance education model. The long-term continuation of emergency remote education has led to the emergence of two different education models (emergency remote and distance education), creating new norms for instructors and students (İlter 2023). In order to understand better what changes in the world in the long term, it is necessary to examine the pandemic period holistically (pedagogically, psychologically, and sociologically) in order to contribute to the efficient education of interior architecture in all circumstances. "Emergency Remote Education" has been added to the education literature with the global spread of the epidemic and the sudden decision of the governments to distance education. In the 2019/2020 Spring Semester, students and instructors were unprepared when distance education started. Universities that do not have sufficient technological technical infrastructure experienced great difficulties in this transition. The education model that everyone has heard and experienced for the first time has been developed and implemented by universities with quick solutions and different solution proposals. In distance education, the student has access to the courses from the location where he is, via the internet and computer/tablet/mobile phone, without going to the campus. Since this education model developed suddenly, it was not planned and experienced before. It is a process that creates anxiety and panic in both students and university institutions. Distance education is an education model that is confused with "Emergency Remote Education" but has different processes and features. Distance education is an education model that has been discussed for years, is planned in advance, allows flexibility of time and place, and is carried out both synchronously and asynchronously by making use of technological opportunities. In this education model, it is more difficult for students to receive feedback than in the face-to-face education model. There are studies in the literature where misunderstandings are common. Some sources ignore the emergency distance education model and deal directly with the concept of distance education. However, emergency remote education is also a part of change and a separate educational model. Distance education is an educational model that is

delivered to students through educational materials, online platforms or other distance communication technologies without the physical presence of traditional classroom instruction. Distance education is usually carried out in a planned and structured manner. Students are provided with a variety of resources, course materials and guidance to support their learning. This model is designed for long-term educational programs and usually covers a specific period of time. Emergency remote education refers to a special distance education model that is quickly deployed when traditional education methods cannot be used due to unexpected events or emergencies. Such emergencies may include natural disasters, epidemics or other similar situations. Emergency remote education is intended to provide a quick solution to educational institutions and students and is often used as a short-term solution. Course content and communication tools are quickly adapted for emergency distance education, allowing students to continue their education. In conclusion, distance education and emergency remote education are two different models of education used for different purposes and under different circumstances. While distance education usually refers to a planned and structured process, emergency remote education is a specialized model used for the rapid resolution of unexpected events. These differences should be taken into account when planning, researching and implementing training methods for educational institutions and literature reviews.

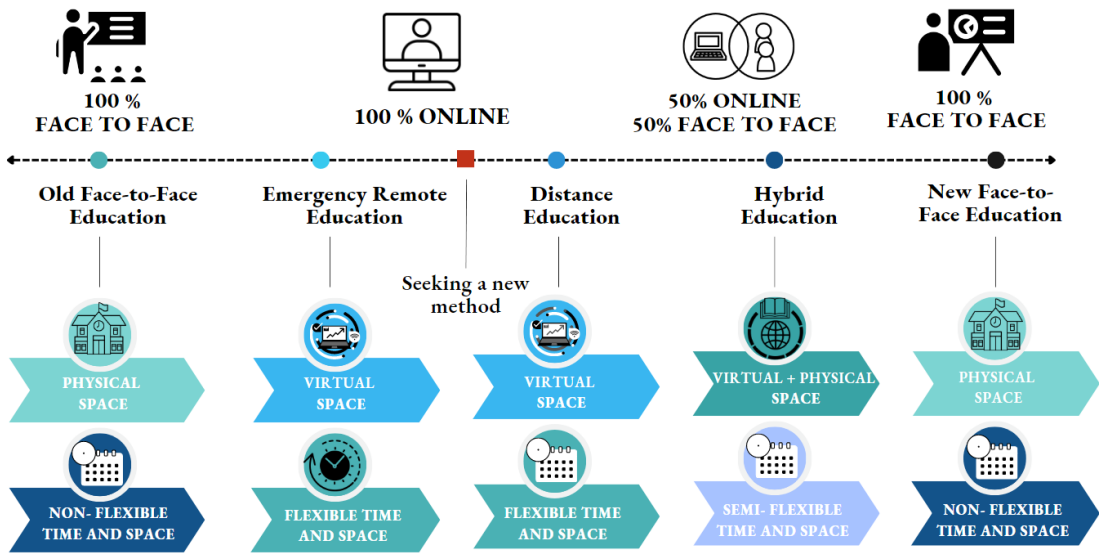


Figure 3.2: Comparison of five education models before, during and after the pandemic

Distance education started to be implemented worldwide in the 2019/2020 spring half year. Students were able to easily access the course notes/materials with the school's own database, and were able to watch and replay the course videos when necessary. Lessons were taught through programs such as Zoom, Google Meet, Adobe Connect, Hangout, Google Classroom, and Microsoft Teams. Instructors and students communicated by establishing WhatsApp groups. Socialization opportunities were limited as students stay away from the campus environment. Both the effects of the epidemic and an asocial life affected the motivation of the students negatively and also created psychological problems for some students. With the global decline of the epidemic and the increase in vaccination, students switched to hybrid education in the spring 2020/2021. The concept of hybrid education can be briefly defined as the combination of distance and face-to-face education. Some of the students came to the school and some of them attended the lesson online. In this model, there has been an adaptation process for the transition between both models (face-to-face and online). While distance education does not create much of a problem in theoretical courses, it is clearly seen in the researches that applied courses should be given face to face. With the control of the epidemic and the new normalization process, a new face-to-face education started in the 2021/2022 Fall Semester. The student and instructor group, accustomed to the use of technological opportunities, continued their education by making positive additions to the old traditional education. From this process, it can be concluded that education should go on regardless of the circumstances and that new educational models, modifications, and transformations will continue to emerge internationally in accordance with the circumstances of the time in order to accommodate the situation.

This section is an introduction to the topic and provides a brief overview of five different education models. Each education model will be explained in detail in the following sections.

3.1. OLD FACE TO FACE EDUCATION MODEL

Before the 2019/2020 fall semester, that is, before the start of the COVID-19 pandemic, all universities were providing formal education. Within the scope of the thesis, if it is necessary to explain the changing education models during the pandemic period in chronological order, first of all, it is necessary to talk about the old face-to-face education model and the method of education in the interior architecture

department. Architectural education consists of a holistic program in which project and design courses and theoretical and applied courses are built together. Applied lessons constitute the main basis of architecture. There is constant activity and mobility in architectural education. The Department of Interior Architecture is one of the departments where all courses, especially applied courses, were held face-to-face before the pandemic. The course instructors give personalized and critical feedback on project-design applications generated by students in face-to-face instruction. Students' projects and designs created within the scope of the course are adjusted in accordance with the instructors' critiques and offered for re-evaluation in an active and practical manner. The critical and evaluation cycle is a situation that should be in architecture faculties and is in constant interaction (Işık Nursen 2021: 27). In interior architecture education, design-oriented workshop courses are applied and project design and technical drawing are mainly taught. Practical courses, in which this type of design is emphasized, are presented in sheets at the end of the semester, supported by presentation (poster preparation), sketches on paper, model preparation, coloring, two-dimensional architectural drawings and three-dimensional visuals after a general research. In this process, in face-to-face design education, the instructor finds the opportunity to intervene in the student's work one-on-one. Thus, the instructor can closely follow the student's interest in the lesson, his/her progress and studies. In the face-to-face applied education model, the student actively participates in the lesson, learns by experiencing the lesson, produces solutions with classmates and instructors and reinforces his learning through group work. In this model, instructors can meet important points such as keeping interaction and motivation high among students more effectively (Mercan and Beyaz Bolat 2021: 73). The effects of classroom experiences on focus and creativity were examined in (Pandey 2020). According to the research, in the classroom, students can be more creative because educators can teach in a way that suits students' absorptive power and capacity to learn. Since architecture and interior design education is design-oriented, the physical environment, communication and interaction of students are of great importance. In design studios, students develop a sense of belonging to the community and this increases their motivation to learn (Uçar and Sağsöz 2022).

The old face-to-face education model, like other education models, has many advantages and disadvantages. First of all, this education model offers a planned and permanent education that has been experienced for many years. Students do not have

problems such as adaptation or motivation difficulties. The time and place of the class is fixed. Education is compulsory. The face-to-face education model is important in terms of personal interaction and communication. By interacting directly with their instructors and peers, students have the opportunity to improve their communication skills. This is a positive feature that can give students a better communication ability. Especially in fields such as interior architecture, where practical and social communication skills are important, the advantages of face-to-face education become even more evident. This educational model contributes to the development of these skills by providing students with workshops and hands-on experiences. It also encourages group work and helps students develop their collaboration skills. Face-to-face education is also effective in providing immediate feedback. By interacting directly with students, teachers can quickly assess students' performance, answer their questions immediately and help them improve their projects through face-to-face intervention.

However, old face-to-face education also has disadvantages. First of all, it lacks flexibility in time and space. Students have to attend classes at a specific time and place, which can give students a sense of limitation. In addition, face-to-face education can lead to an increase in expenses, which can be considered a negative aspect, especially when accommodation, stationery and transportation costs are considered. Less use of technology. It may provide less flexibility in terms of personal learning pace. Not all students learn at the same pace, and face-to-face education may have limitations in adequately adapting to these differences. Finally, external factors, especially pandemics, can negatively affect face-to-face education and cause disruptions. Such factors can seriously affect the plans and processes of educational institutions. In conclusion, face-to-face education has significant advantages, but its disadvantages should not be ignored. The choice of educational methods should take into account the advantages and disadvantages of both approaches and respond best to the needs of learners.

3.2. EMERGENCY REMOTE EDUCATION MODEL

The emergency remote education model is a new education model that entered our lives with the COVID-19 pandemic. It has emerged as a temporary solution to continue education as a result of the sudden closure of educational institutions, social distancing requirements worldwide, and changing personal/social sensitivities. This

education model can be defined as an urgent and short-term solution that was not planned before and defines the rapid and positive intervention of educational institutions in order to adapt to the pandemic situation. On March 12, with the government's decision, universities suspended face-to-face education like other schools (Saraç 2020c). Upon the rapid increase in the number of cases in Turkey and the understanding that the pandemic would last for a long time, with the statement made by CoHE president Dr. Yekta Saraç, the decision taken on March 18, 2020 was made to *"delegate authority to universities to conduct the theoretical courses of formal associate, undergraduate and graduate programs through distance education"* (Saraç 2020b). Following this delegation of authority, all universities in Turkey started to conduct the theoretical courses in formal programs through various distance education methods. Subsequently, as of March 23, this break was terminated with the idea of unity in practice and not interrupting education, and one week later, education started in the digital environment with distance and open education (Saraç 2020b). After this process, with the statement made by CoHE, it was decided to continue the education and training process only with distance education, open education and digital education opportunities during the 2019/2020 Spring semester as of March 26, 2020 (Saraç 2020c). As of March 16, all schools and universities affiliated with the Ministry of National Education and the Council of Higher Education in our country had partially suspended education, and it was later decided that schools and institutions at these levels would continue to teach through distance education. The goal of this decision was to reduce the negative impacts of the pandemic and learning loss by continuing the education and training process (Yavuz et al. 2020: 131). With this decision, the transition to emergency remote education began.

The COVID-19 pandemic has created a crisis that has profoundly affected education systems, and the concept of emergency remote education has entered our lives in order to manage this crisis. Emergency remote education refers to the process of making learning activities similar to face-to-face education without going to the campus with the use of technological tools in times of crisis. This education model is applied as a temporary solution in times of crisis, not planned in advance. In terms of accessibility, it facilitates learning by offering students flexibility in time and space. However, a sudden transition from face-to-face education to emergency remote education can cause adaptation problems among students. Research shows that students may have difficulty adapting to this change. In distance learning processes,

the interactional and emotional distance between the learner and the instructor can lead to a reduction in expected learning gains. This is especially evident when combined with factors such as the newness of the educational model, students' inexperience and adaptation difficulties, and lack of motivation. In addition, the digitalization of course materials prepared for face-to-face instruction can create an additional workload for teachers. This process may require educators to develop their technological skills and master new teaching tools and platforms. At the same time, instructors may need to make extra efforts to adapt the course content and learning experience to the online environment and present it effectively to students. In the remainder of the research, emergency distance education and emergency remote education models will be compared and the differences between these education models will be more clearly revealed.

3.3. DISTANCE EDUCATION MODEL

Distance education practices in Turkey officially started on March 23, 2020 due to the COVID-19 pandemic. In this process, educational materials were provided to students through online platforms, and teachers and students continued their education using digital communication tools. According to UNESCO, as of April 17, 2020, schools were entirely closed in roughly 190 nations worldwide owing to the COVID-19 pandemic; schools were partially or regionally closed in four countries. Around 91.4% of students at all educational levels were affected by the outbreak (Eken et al. 2020: 115). The pandemic unavoidably had an effect on academic institutions all across the world. The International Association of Universities, UNESCO reports that in April 2020, 50% of higher education institutions ceased all campus activity, 30% partially opened but with significant disruption, and 10% operated as normal with containment measures, affecting 1.5 billion or 89% of students (Marinoni et al. 2020: 8). Yet, the disruption brought on by the epidemic has sped up the transition to online teaching and learning, producing a quick change in pedagogy from face-to-face instruction to virtual instruction, seminars to webinars, and traditional class sessions to online class sessions. Learning engagement, learning motivation, learning anxiety, and usage of free online resources are only a few examples of how students' learning styles and behaviors have altered (Cheung et al. 2023: 2). Distance education is a cutting-edge educational system that takes place in entirely virtual settings independent of time and location, requiring neither the student nor the instructor to

physically be there. Important precautions are required to prevent the education process from being disrupted in these situations because natural catastrophes like earthquakes, floods, fires, unfavorable weather conditions like heavy snow, rain, or storms, and terrorist acts may cause the education to halt temporarily. Measures are taken inside the schools in situations where illnesses or epidemics may have an impact on pupils' health, but instruction is not disrupted (Kahraman 2020: 45). Although emergency remote education activities continued during the epidemic process are perceived as similar to traditional distance education activities, there are great differences between the two processes (Bozkurt 2020: 116). Over the years, educational technology researchers, particularly in the sub discipline of online and distance learning, have carefully defined terms to distinguish between the highly variable designs solutions that have been developed and implemented: distance learning, emergency remote learning, hybrid learning, face-to face learning, mobile learning, and others. Yet, comprehension of the critical distinctions has largely remained confined to the insular world of educational technology and instructional design academics and professionals (Hodges et al. 2020).

However, one of the most important problems encountered in this education model is the deterioration of educational equality. While all conditions are equal for the students who receive education in the face-to-face education model, there are problems such as the differences in geographical conditions, the inadequacy of electricity, internet and technical infrastructures, and the different living conditions in the distance education model (Mercan and Beyaz Bolat 2021: 73). Similar to this, UNESCO supports nations in their efforts to lessen the immediate effects of school closures, especially for underprivileged groups, and to make it easier for everyone to continue their education through distance learning (UNESCO 2020). Another problem that arises due to the process experienced in the distance education process is that the online education is recorded and in this way, the students can acquire comfortable behaviors such as not participating and not listening while the lesson is being taught, thinking that they can listen to the lessons over and over again whenever they want (Şekerci et al. 2021). On the other hand, recorded lessons provide an advantage for students who want to watch the lessons over and over again. In the studies it is pointed out that the distance education paradigm is adequate for theoretical courses. However, there are several challenges encountered when using this paradigm in applied courses (Kahraman 2020: 54).

The comparison made between distance education and face-to-face education was one of the occurrences witnessed throughout the pandemic. According to Russell's meta-analysis research, when educational technology and distance education are designed correctly, there is no difference between face-to-face education and distance education (Bozkurt 2020: 118). As explained in Equity in Interaction Theory, meaningful learning experiences can occur when high-quality educational interaction is provided even in one of the types of learner-learner, learner-instructor or instructor-content interaction (Anderson 2003). During the COVID-19 Pandemic period, many studies have been carried out at home and abroad on the thoughts and effects of students studying in architecture departments about this process. According to another study, it was started that the majority of the students do not prefer distance education in applied courses and that distance education can be used in theoretical courses (AL-ayash and Hussein 2020). A survey conducted by 214 students studying at Dicle University Faculty of Architecture about distance and face-to-face education models (Işık Nursen 2021: 38) reached the same findings regarding the subject. According to the results of the survey, it was determined that the students' participation in the lessons decreased due to the opportunity to watch the lessons again in the distance education model. In other words, the time that students spend for the course in face-to-face education has decreased in the distance education process. Some differences between distance education and face-to-face education are briefly summarized in 'Table 3.1'.

Table 3.1: Comparison of 'Distance Education' and 'Face-to-Face Education' (Wati and Yuniawatika 2020; University of the people 2023)

THEMES	**EDUCATION MODELS**	
	DISTANCE	**FACE to FACE**
Students' Role	- More active, explorer, and troubleshooter.	- More passive, listener, receiver. -The student may take a competitive and more ambitious approach
Instructors' Role	- Facilitator and student interactive	- Instructor centered, easily accessible time and materials expert.
Place	- At home independently, staying away from the university environment, more flexible, required technology - Time and location flexible	- At school together, social campus life, less or not flexible, it just take technology sometimes - Time and location constraints

Table 3.1 Continued

Time	-Flexible	-Regular and less flexible
Study Conditions	- Individual study - Education takes place digitally with the help of technology. - Students may set the pace	- In-studio group working opportunity - Teaching with traditional methods (sheet, model, desk critical, sketch on paper) - Instructor sets the pace
Interactions	- Closer between parents and friends	- Closer between instructors and students
Preparing for a Lesson	- The instructor has to prepare more course material	- The instructor prepares less course material
Communication	- It can be synchronous and asynchronous - Lack of immediate feedback	- Instructor and students meet synchronously - Getting help and feedback from the instructor in a short time
Participation	-Mandatory	-Mandatory but flexible
Expenses	- Reduction in stationery and travel costs - It is not environmentally friendly as the school is accessible by car or school bus.	- Increase in stationery and travel expenses - Online courses have 85% less carbon emissions and consume 90% less energy than conventional, in-person classes.

The COVID-19 pandemic, has negative effects on a global scale and caused the majority of the world's population to be confined to their homes or to be isolated, it has also added a new dimension to education (Borokhovski et al. 2021: 3). Especially in order not to take away the right of individuals to receive education and to minimize the inequality of opportunity in education, countries have sought an urgent solution. For this reason, applications have been started quickly for the transition from traditional education to distance education. Due to the risk of COVID-19 transmission and the governments' decision to distance education, universities have faced problems about how to continue education while protecting their staff and students from the spread of COVID-19. This is the beginning of the emergency remote education process. The main objective under these circumstances is to provide temporary access to teaching, learning and instructional resources in a way that is easy to put up and is consistently available throughout COVID 19 crises, rather than to recreate and develop

a robust educational environment (Agormedah et al. 2020; Hodges et al. 2020). Distance education was the first alternative adopted by countries to maintain education throughout the pandemic. For the first time in history, distance education has received such attention, has risen to the forefront, and has begun to be applied all over the world. Countries with a high level of development have given priority to distance education, created the necessary technological infrastructure easily, and easily passed from the traditional education process to the distance education process (Azionya and Nhedzi 2021: 171). The education system, which is constantly changing with the COVID-19 pandemic, has brought some problems with it. Among the problems encountered are; the increase in cost in distance education applications, the fact that education policies are not suitable for the age, the inability of students to construct knowledge, the experience of generational conflicts, the inadequacy of technological infrastructure and the lack of effective communication (Yurdakal and Susar Kırmızı 2021). It has been stated by different researchers that there are some problems in the application of new methods of distance education. For example; learning loss, alienation from the profession of architecture and interior architecture (Ceylan et al. 2020), desire to drop out of school, psychological problems related to high anxiety, depression and stress (Asadpour 2019), financial, moral and social losses (Charters and Murphy 2021), inequality of opportunity problems (Eken et al. 2020: 121), electricity and internet infrastructure problems, and problems with technological equipment (Şekerci et al. 2021) and some problems experienced in the adaptation process regarding the continuity of the course, teaching methods, measurement tools and methods (Sarı and Nayır 2020). The basis of this is the fact that no preparations have been made for emergency remote education before.

Each discipline of science has its own unique set of qualities, requirements, and educational philosophy. During the COVID-19 epidemic, each department had its own set of challenges and adaption issues as it transitioned to online education at universities. To be meaningful and purposeful, online education must include cognitive, affective, and systemic components and be backed by appropriate connections (Ceylan et al. 2020). But; it’s difficult to say that the process works in the same way in countries with a lower level of development (Eken et al. 2020: 118). According to (Bozkurt 2020: 116); pandemic psychology is divided into three stages: fear, explanation, and action. In this context, emergency remote education applications may be defined as the stage of action by education stakeholders. Before determining

educational strategies, a number of factors such as technological infrastructure, target audience, age range, social and economic context should be carefully considered (Bozkurt and Sharma 2020: 3). In light of these issues, it is critical to characterize the applications developed during the COVID-19 crisis as emergency remote education, rather than focusing on the incorrect applications over the wrong principles and exacerbating the present bad perceptions of distance education (Bozkurt 2020: 116). Emergency Remote Teaching (ERT) is a temporary switch of instructional delivery to a different delivery medium as a result of emergency situations, as opposed to experiences that are planned in advance and intended to be online. The primary objective of this technique is to develop quick, interim fixes for interrupted educational activities. These workarounds may really be thought as reflexes that use a variety of internet technologies to instantly connect the instructor and the student. In other words, this procedure may be seen as a repair process that provides educational experiences that are not intended to be flawless when seen in the context of planned distant educational processes (Sezgin 2021: 275). According to (Hebebci et al. 2020) research; "Emergency Remote Teaching (ERT)" has been effective as a quick solution. Because students have not fallen behind academically and online education activities have greatly reduced the negative consequences of widespread school closures. It entails using totally remote teaching solutions for instruction or education that would typically be offered in person, through blended learning, or as hybrid courses, and that will switch back to that format once the crisis or emergency has passed (Czerniewicz 2020).

In these situations, providing temporary access to teaching and instructional aids in a way that is easy to put up and consistently available during an emergency or crisis is the main goal rather than rebuilding a strong educational environment (Hodges et al. 2020). Despite data to the contrary, online learning is reflected as lower quality than face-to-face learning. These hurried online moves by so many institutions at once may cement the perception of online learning as a weak option, when in reality, no one transitioning to online teaching under these conditions will truly be designing to take full advantage of the affordances and possibilities of the online format (Hodges et al. 2020). To better comprehend and analyze the discussions around the associated notions, it is crucial to distinguish between the concepts of ‘emergency remote education’ and ‘distance education’ (Bozkurt 2020: 116). Although these two notions are similar, there are slight but significant differences between them (Hodges et al. 2020). To summarize briefly; the concept of "*Acil Uzaktan Eğitim*", which is the

English equivalent of the concept of "emergency remote education", and "*Uzaktan Eğitim*", the English equivalent of the concept of "distance education". Although the concept of distance is expressed with the same word in Turkish, the concept of "remote" emphasizes physical distance, while the concept of "distance" emphasizes physical, interactional and psychological distance (Bozkurt 2020: 117). Emergency remote education; since it emerged at the time of crisis, governments have started to make changes and transformations in education. In other words, this is a temporary but situationally most effective solution technique applied to a problem. Distance education is an option. In the emergency remote education model, education was provided with the available and limited opportunities. In distance education; in line with a purpose, an effort was made to make education sustainable with planned and systematic activities. While temporary solutions were produced for the current situation in the emergency remote education model, planned and permanent solutions were produced in the distance education model. Many experts, instructors, academics, or parents, together with educational institutions, are administratively, technologically, and pedagogically unprepared for the effect of the COVID-19 pandemic, as can be seen from the reflections of the emergency remote education processes of many nations (Ferri et al. 2020: 5). Distance education is a pre-planned education model (Sezgin 2021: 275). Emergency remote teaching or re-engineered distant education should collaborate with diverse shareholders (e.g., psychologists, sociologists, therapists, etc.) to deliver better and quicker answers. Developing answers on broader grounds is necessary, because during times of crises, delivering information is not the only topic of concern, caring and supporting learners at such times is equally critical (Bozkurt and Sharma 2020: 3). The summary of the sources in the literature is given in ‘Figure 3.3.’.

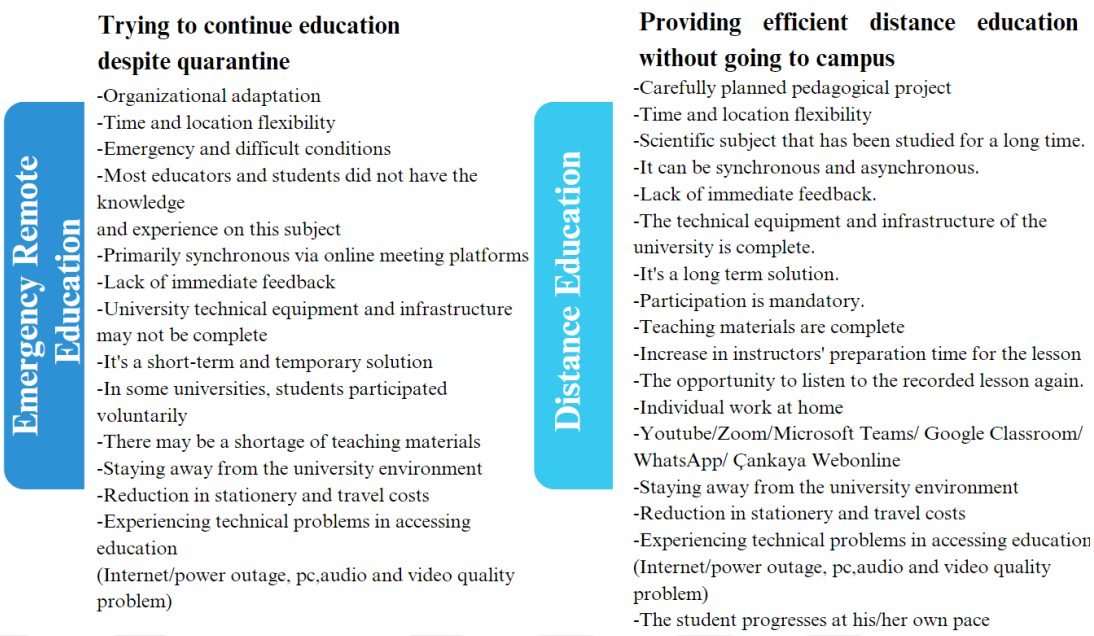


Figure 3.3: 'Emergency Remote Education' and 'Distance Education' models comparison table

(Hodges et al. 2020; Lewison 2020; Bozkurt 2020)

During the COVID-19 epidemic, one of the most noticeable circumstances was the supply of solutions based on distance education technology, particularly in the context of emergency remote education (Bozkurt 2020: 119). The belief that technological solutions would address educational problems is not unique to the epidemic (Koehler and Mishra 2009). Throughout the epidemic, the internet has been crucial in boosting e-learning (Favale et al. 2020). Academics reassessed the best ways to use technology to spread information across all educational levels. It's critical to research the effectiveness and students' perspectives of integrating technology into education, especially in places where e-learning is uncommon (Wijenayaka and Iqbal 2021). Owing to the global pandemic, both professors and students who continue their education through distance learning (online) have had difficulty adjusting to this system. Academic research have stressed that when face-to-face instruction is interrupted, students suffer learning losses, and that these losses vary among individuals (Işık Nursen 2021: 29). Distance education allows students to expand their learning beyond the limitations of traditional learning institutions by engaging in informal and enhanced learning experiences on new platforms such as social media and other social platforms (Saykili 2019: 11). Lack of internet-based infrastructure and inadequate initial planning for this system were issues that higher education

institutions encountered when they quickly transitioned to distant learning, which had an impact on both students and instructors (Telli Yamamoto and Altun 2020: 30).

E-learning refers to distance education for students who are not in a traditional classroom setting. To ensure understanding, instructors must monitor student progress and ask clarifying questions (Fewella 2023: 2). Pupils may learn through webinars and social media (Keswani et al. 2020: 27). Online lectures have been delivered using platforms like Zoom, Moodle, Google Classroom, Google Meet, Hangout, Adobe Connect, Microsoft Teams and other learning management systems (LMS). Apart from these programs, students used the Webonline system, which most of the universities created with their own database, to access course information. Distance education is more than just a single structure or pedagogical approach (O'Keefe et al. 2020); it is a system approach comprised of interconnected pieces with various learning resources and modes of communication that each serve a distinct function. It is critical in distant education to strike the correct balance, to use technology and pedagogy for a purpose, to provide an effective and efficient learning process, and to have meaningful learning experiences (Anderson 2009). In addition, it has been observed that academics who provide education through distance education for the first time need technical support (such as digital course content and presentation designs) to stay up-to-date with technology (Ferri et al. 2020: 9; Pradas et al. 2021: 3). Students can communicate and collaborate with their friends and instructors using platforms like Zoom, WhatsApp, and online discussion boards (Agormedah et al. 2020: 200). Online distance education comprises more than merely downloading educational information; rather, it is a learning process that allows learners agency, flexibility, responsibility, and choice. It is a complicated process that involves careful and strategic planning, designing and setting of objectives to produce a successful learning ecosystem (Bozkurt and Sharma 2020: 2).

The usage of distant education can be seen as one of the markers of a country's, institutions, or even an individual's readiness to adapt to the current era and technology. Currently, so-called developed countries offer the concept of lifelong learning as a value for secondary goals such as contributing to their aging population, even making it a culture and placing a high emphasis on lifetime education activities. As a result, online education, which eliminates time and location constraints, allows for ongoing education-learning activities. Owing to geographic and economic constraints, orienting to remote education applications has become an unavoidable

requirement (Kırık 2014: 76). The historical roots of remote education can be traced back to ancient times, with the formal interaction between a instructor and a student being a defining characteristic. In reality, the world's inaugural instance of remote education can be traced back to the "Steno Lessons" advertisement in a Boston newspaper on March 20, 1728. In the 19th century, the University of Sweden introduced "Composition by Letter Lessons" for women. Subsequently, in 1833, a Swedish newspaper featured an advertisement for written expression lessons to be conducted through letter. (Uzaktan Eğitim 2022). Isaac Pitman is credited with pioneering the world's initial distance education initiative in 1840 in England. As a stenographer, he initiated the teaching of shorthand through correspondence in Bath, England, offering instructional opportunities to remote learners. This approach to distance education in England was later adopted in 1894 when students pursuing teaching certificates from overseas engaged in written exchanges to share information (Hızal 1983). The University Correspondence College was founded in 1843 to teach students how to write letters (Arat and Bakan 2011: 365). In 1856, organized efforts in the realm of distance education began to take shape. During this period, Charles Toussaint and Gustav Langenscheid established a language school in Berlin, Germany, known today for its educational materials published under the Langenscheid name, marking an early foray into distance education. In 1920, the first educational radio started broadcast in the USA, and then the number of educational radio programs increased in England, France and the Soviet Union. Between 1932 and 1937, the first educational television broadcast started at IOWA University in the USA. Television broadcasts, which were initiated to support teaching, have become widespread in the world since the 1940s. In Turkey, the idea of distance education was brought to the agenda for the first time in 1927 at a meeting where education problems were discussed. In this meeting, it was emphasized that distance education should be used to make people literate. In those years, the distance application, which was recommended in the form of teaching by letter, could not be started (Alkan 1987). The most important reason why this practice could not be started was the belief that literacy cannot be taught without an instructor in a country where 90% of the population is illiterate. The developments in distance education, in direct proportion to the socio-economic conditions and by following the countries of the world, started with the establishment of the Letter Teaching Center for the teaching of some technical subjects in 1960 by the Ministry of National Education. With this method, which is seen as

economical, many individuals were educated by letter. In 1975, in order to train instructors in the fields of mathematics and science, it was aimed to combine the methods of teaching by letter, television and radio in addition to face-to-face education. Until 1956, it was discussed whether or not distance education should be started in Turkey. Learning by letter for foreign language instruction in Turkey began in 1953 with the brand "Limasollu Naci". This approach, which was theoretically debated in the 1960s and 1970s, became widely used with the establishment of the "Anadolu University Open Education Faculty" in the 1980s. Distance education began in the computer environment with the benefits of internet technologies in recent years, then progressed into mobile education with the increase in connection speeds and the creation of mobile devices (Telli Yamamoto and Altun 2020: 26). Between 1974-1979, while the "Common Higher Education Institution" was in operation to provide education opportunities for high school graduate students and to train intermediate manpower at the associate degree level, thousands of people received distance education. In 1978, it was suggested by the Ministry of National Education to establish an "Open University" in higher education, but it could only be implemented in 1981 with the passage of Law Number 2547 and the first Open Education Faculty affiliated with Anadolu University. Its lectures were also supported by radio and television broadcasts. The development of communication technologies has increased the use of open and distance learning systems in higher education. In the 1990s, other universities started to switch to distance education applications (Karaca et al. 2021: 4).

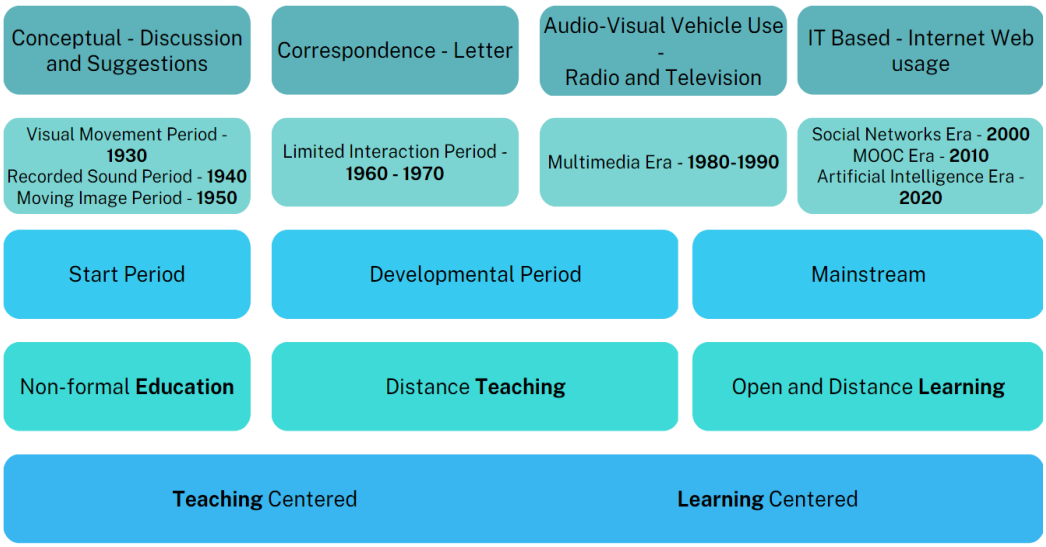


Figure 3.4: Developmental stages and history of distance education (Bozkurt 2017: 87; Bingöl Unıversity 2019)

According to his research (İlter 2023: 34), the psychological reflection of the online education model on students is stated as follows: it was stated that they felt lonely and it was concluded that interpersonal cooperation was lost. In addition, according to the survey data, 1st year undergraduate students find online education negative and insufficient in terms of both education and psychology, while 4th grade students support distance education. Excessive use of technological devices (such as computers and mobile devices) used in the distance education process can lead to both psychological and physiological problems, and spending too much time in front of the screen can cause health problems such as headaches, back pain, and eye deterioration (Sağlamel and Erbay Çetinkaya 2022: 482). Since the beginning of the pandemic, research results have scientifically revealed that there are both positive and negative opinions towards emergency remote education and distance education in Turkey, both through survey data and researcher comments. Some of the primary and secondary affected people, such as instructors, students, and parents, find distance education satisfactory. This is due to factors such as the perception that educational losses are compensated quickly and effectively, the distance education model provides students with flexibility in time and space for learning, the student's learning process continues by encouraging self-regulation and improvement, and the low financial costs. Moreover; it also supports areas such as students' interaction using online technologies, development of program usage skills, time management and organization (Joosten and Cusatis 2020). However, limited social interaction, infrastructure problems, technological problems, increasing screen time, lack of social interaction, poor communication between parents - children, student- instructor, adaptation and orientation problems, increasing labor force, decreasing feedback speed are factors that cause people to feel negatively. In the case of Çankaya University, it was observed that the student attendance rate was as high as 90% and the interest of the students in the distance education process was high. These statistics show that the distance education method is welcomed positively by interior architecture students and supported by active participation (Urak et al. 2021: 100).

3.3.1. Synchronous and Asynchronous Learning

There are several sorts of remote education application, and it is observed that online learning types are more commonly used. Under the context of distance education, courses can be delivered both synchronously, asynchronously or a hybrid

of the two. Whereas in asynchronous learning the learner is not in real-time communication with the instructors and other students, in synchronous learning the learner may engage with the instructor and other students in real-time (Belanger and Jordan 2000). Students and instructors in simultaneous education gather at a set time (typically online) and conduct the lessons live (Fidalgo et al. 2020: 2). In this method it is attempted to give a more active environment for instructors and learners, such as in-class interaction and discussion, quick questioning and expressing aspects that are not understood, and a setting similar to face-to-face education. Asynchronous education, on the other hand, is a style of education in which professors and students do not work concurrently and students can receive course content (presentation, video, audio recording, etc.) through the internet anytime they want or need it. Participants communicate mostly via e-mail and online forums, which are frequently regulated by instructors (Watts 2016: 26).

The terms “synchronous” and “asynchronous” learning have become omnipresent in describing online learning although they similarly exist in in-person learning environments. Synchronous learning refers to instructors and students gathering at the same time and (virtual or physical) place and interacting in “real-time”. Asynchronous learning refers to students accessing materials at their own pace and interacting with each other over longer periods (Coogle and Floyd 2015: 173). Asynchronous instruction, however, allows for greater temporal flexibility. This gives a larger range of pupils’ access to the information and gives them more time to investigate and interact with it (Davidson-Shivers et al. 2001).

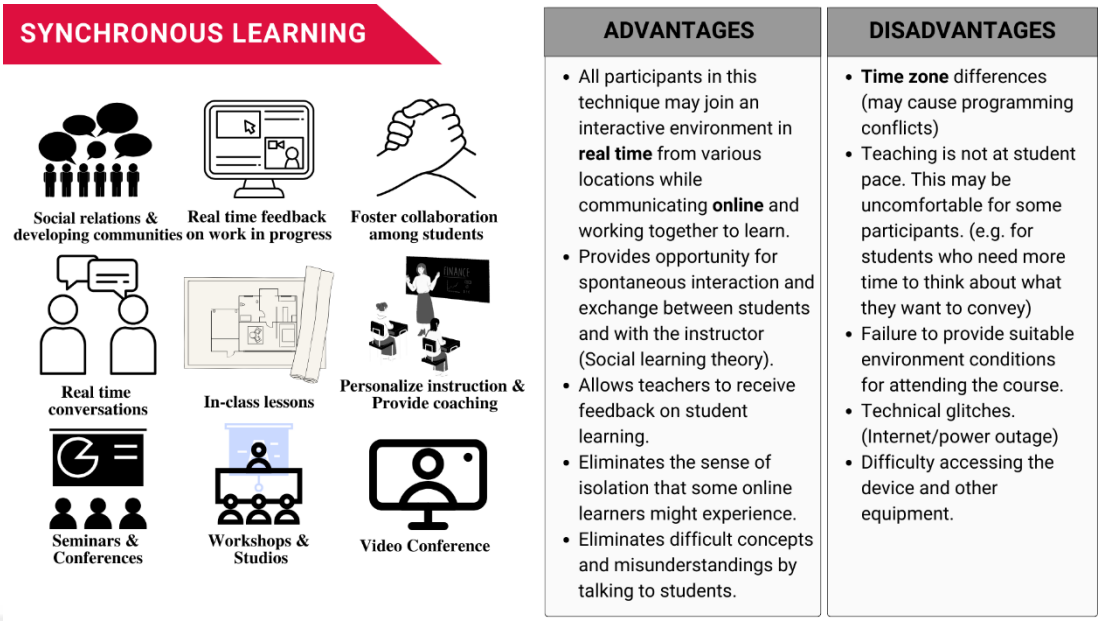


Figure 3.5: Advantages and disadvantages of synchronous learning (Tucker 2020)

Synchronous learning is one of the online learning techniques in which instructors and participants come together and interact with each other from different places on the virtual environment at the same time. Many tools that allow students to hear, see and share applications on the internet can also be used this in distance education method. These simultaneous systems make students feel less isolated and increase social communication (Giesbers et al. 2013: 4). It provides faster information exchange and feedback between instructor and student. Accessibility problems are experienced depending on the development level of the countries, internet connection speeds, technological equipment adequacy and infrastructure of universities (Baki et al. 2009).

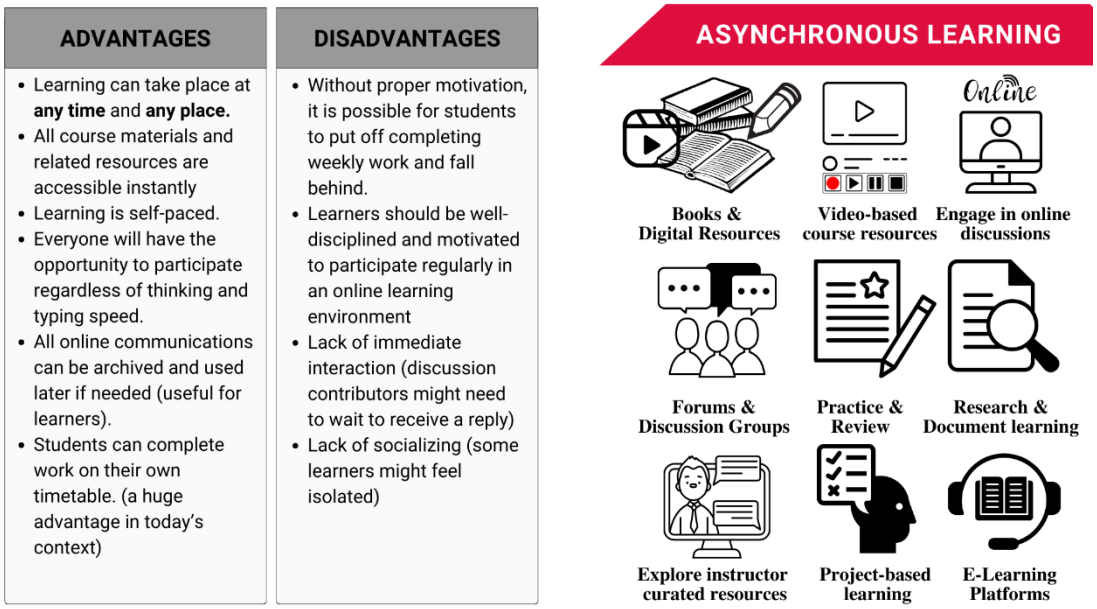


Figure 3.6: Advantages and disadvantages of asynchronous learning (Tucker 2020)

Although asynchronous learning has many advantages, there are some disadvantages that should not be forgotten. These disadvantages may include socialization problems, individual learning difficulties, lack of immediate response. Asynchronous learning can limit the opportunity for students to physically interact with their classmates and instructors. This can deprive students of the opportunity to develop their social skills and experience group work. There is also the risk that students may not receive immediate answers or help for problems they encounter in their learning process. This can limit students' ability to solve their problems quickly. Each student has different individual learning styles and speeds. Asynchronous learning may not suit the needs of individual learners. In particular, students who need more guidance or support may have more difficulties with this method. Technology can significantly alleviate these disadvantages. Instructors can use a variety of digital tools to track students' learning progress and intervene when necessary. For example, video monitoring activities can be used to assess the amount of time students are watching and their level of comprehension. Providing students with feedback on when and for how long they have participated can make the learning process more efficient. Discussion platforms are useful for increasing student engagement. Tools such as question and answer sessions and tracking student participation can make the teaching process more interactive and provide more opportunities for students. This can help students adapt better in an asynchronous learning environment (Tunçer 2023).

3.4. HYBRID EDUCATION MODEL

The transition from distance education to a hybrid education model began in the fall of 2021-2022 when vaccination rates increased and the global pandemic situation improved. As of February 15, 2021, hybrid education was introduced. The word hybrid, which is based on biology and is used in the sense of hybridity in Latin, has the same meaning with concepts such as blending and mixing in the literature (Pedersen et al. 2018: 228). In some sources, and in general, such a default definition is the use of two existing phenomena together to obtain a better product. As can be understood from this expression, in hybrid education, half of the course is done face-to-face and the other half is done by distance education (Kastornova and Gerova 2021: 261). It is expected that in the framework of planned educational actions, there will be a tendency toward HyFlex (Hybrid Flexible) apps as well as hybrid education applications in the post-pandemic new normal (Bozkurt 2020: 117).

In all education models, instructor, student, curriculum and many other factors play a decisive role in the implementation. Another determining factor in hybrid and distance education is technology and communication tools. Distance education elements, virtual classroom environments, video conferencing tools, online interaction platforms and other digital resources support the hybrid education process by enabling students and instructors to interact and collaborate. Hybrid education provides a balance between face-to-face education and distance education. This balance helps students to enrich their learning experience and access information more quickly. In addition, this model can offer more flexibility in time and space in the education process (Koç Akran 2021: 433). The curriculum should be carefully planned for successful implementation in hybrid education. Curriculum content, objectives and assessment methods should be designed in a balanced way to ensure that students can work effectively with both face-to-face and distance learning in a hybrid environment. Flexibility and diversity play an important role in ensuring that the curriculum is adapted to suit the needs of learners.

The instructor is one of the main carriers of hybrid education. Tutorials help to improve students' understanding by guiding the learning process, explaining content and providing interactive course materials (Villegas-Ch. et al. 2021). Hybrid education, which provides advantages in complementing the deficiencies of distance education and supporting face-to-face education, strengthens the communication and

interaction bond between the instructor and the student (Koç Akran 2021: 434). Each student has different learning styles, interests and needs; therefore, it is important to adopt a student-centered approach and provide an education that takes into account the individual differences of students. The student is the focal point of hybrid education and is at the center of the educational process (Koç Akran 2021: 435). In student-centered education technological tools are used more (Nikolopoulou 2022; Coates et al. 2021), the individual differences of the student are taken into account, and information from a single source is prevented. This new student profile is characterized as e-individuals who question, criticize, research, and adapt to science and technology (Koç Akran 2021: 435). Due to the social connection with peers, students have stated that face-to-face classes have improved their attentiveness and given those pleasant experiences (Lee et al. 2022). (Finlay et al. 2022) report that the methodology is successful for both theoretical and practical learning. Hybrid education provides a low-cost environment because with distance education, the necessity of physical presence in the classroom environment is eliminated. By technology support, instructors and students can access information whenever they want (Potra et al. 2021: 9). This increases students' motivation towards the lesson and the environment (Koç Akran 2021: 434). In an environment with increased motivation, student engagement is supported by mobile learning, artificial intelligence applications and other technological tools (Gleason and Greenhow 2017). In conclusion, the hybrid education model can provide a balance between traditional face-to-face education and distance education, offering students more flexibility, access to resources and personalized learning opportunities. However, as with any educational model, successful implementation requires effective integration of instructors, students and technology. There are not many sources in the literature on the application of the hybrid education model in the department of interior architecture, and it is recommended to conduct more research on the subject.

3.5. NEW FACE TO FACE EDUCATION MODEL

On August 15, 2021, the new face-to-face education was signaled and on September 3, 2021, as a result of the decrease in the pandemic, the new face-to-face education started to be implemented in the fall semester of 2021-2022. Universities have implemented new hygiene protocols and measures to protect student and staff health to reduce the impact of the pandemic. Important practices such as social

distancing measures, mask use and hand hygiene have become common elements in educational environments. Attention was paid to these elements in the hybrid education model experienced during the pandemic period. In addition, the implementation of the hybrid education model facilitated the transition to the new face-to-face education model and shortened the process of students' adaptation to school. The COVID-19 pandemic has emphasized the importance of digital skills in the field of interior architecture, as in all fields. In the new face-to-face education period, universities integrated their digital infrastructures into the courses and provided students with more opportunities to use their skills in data visualization, 3D modelling, virtual reality and other digital tools.

Although the new face-to-face education model seems to have similar features with the old face-to-face education model, it has changed in many ways due to the pandemic. The opportunities offered by technology have gained more importance. The Zoom program, which entered our lives with the pandemic period, still has a certain share of use. It is also seen that WhatsApp application is used to ensure communication in this education model. Students continue to access critical information by using drawing programs such as AutoCAD through projection instead of taking notes to improve their projects and receive criticism. Also, 3D modeling is assessed using digital modeling programs rather than physical models or 3D sketching. Presentations and animations are projected on the board through projectors rather than hardcopy plotted drawings and sheets. In short, the practices and methods used in distance education continue to be used in the new face-to-face education model. This offers a positive diversity in education resulting from the use of both physical and digital platforms.

In the new face-to-face education model, education continues as a permanent, pre-planned and compulsory process. Students come to the campus to receive education. Although this leads to an increase in stationery and travel costs, it has a positive effect in terms of social interaction and group work. In the new face-to-face education model, no matter how much the pandemic has decreased, mask, distance and hygiene rules are also taken into account in classroom environments and universities take the necessary measures.

In Table 3.2, a comparative analysis of the evaluation of the five distinct educational models examined as part of this study is shown.

Table 3.2: Comparative analysis of five different education models in interior architecture education

(Bozkurt 2020; Hodges et al. 2020; Wati and Yuniawatika 2020; Bakir et al. 2022; McNulty 2021; Yu et al. 2009; Bencheva 2011; Fewella 2023; Buldaç 2021; Kasap 2021, Sezgin 2021)

Education Models / Evaluation Criteria	Old Face To Face Education	Emergency Remote Education	Distance Education	Hybrid Education	New Face to Face Education
Conditions	-Traditional educational conditions - Available teaching materials and resources	Organizational adaptation - Emergency and difficult conditions. - Lack of online knowledge and experience of instructors and students. - Shortage of teaching materials - Quick setup of reactive, yet reliably available resources	Pedagogical project planning - Scientific study for a long time - The technical equipment and infrastructure of the university is complete. - Rich, detailed resources provided proactively. - It's a long term solution - Teaching materials are complete	-Different people in face-to-face and distance education environments - Face-to-face compensation of accessibility - Helps to adapt both distance and traditional education. - Increase of social communication and motivation	Continuation of traditional education conditions with change and transformation - Frequent use of distance education method - The widespread use of digital presentation instead of layouts - Increase of social communication and motivation
Qualification	Planned, organized and permanent	Short-term and temporary solution	Planned, organized and permanent	Planned, organized and permanent	Planned, organized and permanent
Space	Physical	Virtual	Virtual	Physical and Virtual	Physical
Attendance	Compulsory	Compulsory	Compulsory	Compulsory	Compulsory

Table 3.2 Continued

Adaptation/ Preparation Necessities	- Continuing the lessons with the available resources of the instructors	- Preparation time increase of instructors for the lesson, - Adaptation to online platform	- Preparation time increase of instructors for the lesson, - Adaptation to asynchronous / synchronous learning	- Instructors'/ students' adaptation need for technological systems conveying hybrid education	- Starting to use the applications or methods used in distance education in the physical classroom environment
Student Approach	Competitive and ambitious approach	Concern for the continuity and method of education	Progress of students at his/her own pace	Students cognitive and instructors work load increase	Students display competitive and more ambitious approach
Method	Teaching with traditional methods (sheet, model, desk critics, sketch on paper, etc.)	Seeking a new method and Interactive sources	Rich, detailed digital platforms and resources provided proactively (No sheet, model, desk critics, sketch on paper, etc.)	- Rich, detailed digital platforms and resources, - Physical interaction possible if needed	- Technology usage (digital presentation, animation, group critique, digital sketch), - Physical and digital platform usage
Student Work	In-studio individual or group work	Shortage of teaching/working opportunities	Online individual or group work	In-studio or online individual or group work	In-studio individual or group work
Learning	Synchronous	Asynchronous and Synchronous	Asynchronous and Synchronous	Asynchronous and Synchronous	Synchronous and asynchronous for additional support
Social Life	Campus	Home	Home or other places	Campus and other places	Campus

Table 3.2 Continued

Time and Money Considerations	- Increase in stationery and travel expenses	- Reduce in travel and stationery expenses, - Technology and maintenance cost	- Reduce in travel and stationery expenses, - Technology and maintenance cost	- Slight increase in stationery and travel expenses, - Technology and maintenance cost	- Increase in stationery and travel expenses
Technical Infrastructure	Traditional technical equipment and infrastructure	Incomplete technical equipment and infrastructure	Complete technical equipment and infrastructure	Complete technical equipment and infrastructure	Complete technical equipment and infrastructure
Digital Platforms	Webonline	Webonline, WhatsApp	Webonline / YouTube / Zoom/ Microsoft Teams/ Google Classroom/ WhatsApp	Webonline / YouTube / Zoom/ Microsoft Teams/ Google Classroom/ WhatsApp	Zoom/ Webonline, WhatsApp
Problems	Un-innovative less usage of technology	Technical problems (Internet/ electricity outage, PC, audio and video quality)	Technical problems (Internet/ electricity outage, PC, audio and video quality	Adaptation problems due to experience of both models	Hygiene, social distance rules, use of masks, technological needs

According to the analysis based on Table 3.2, the COVID-19 pandemic has brought significant changes in the Department of Interior Architecture. These changes required the implementation of different educational models so that teaching and learning processes could continue even in challenging conditions. These models include the old face-to-face education, emergency remote education, distance education, hybrid education and the new face-to-face education model.

Old face-to-face education represents the traditional education system before the pandemic. This model, which is carried out with compulsory attendance on campus, is based on traditional teaching approaches. Emergency remote education offered a short-term solution implemented at the beginning of the pandemic and was realized with virtual teaching and limited resources. Distance education can be defined

as a pre-planned and permanent model. In this model, comprehensive resources were provided and students were supported to progress at their own pace. However, distance education and emergency remote education have encountered difficulties by students who prefer face-to-face interaction and traditional methods, especially in applied courses such as design studios.

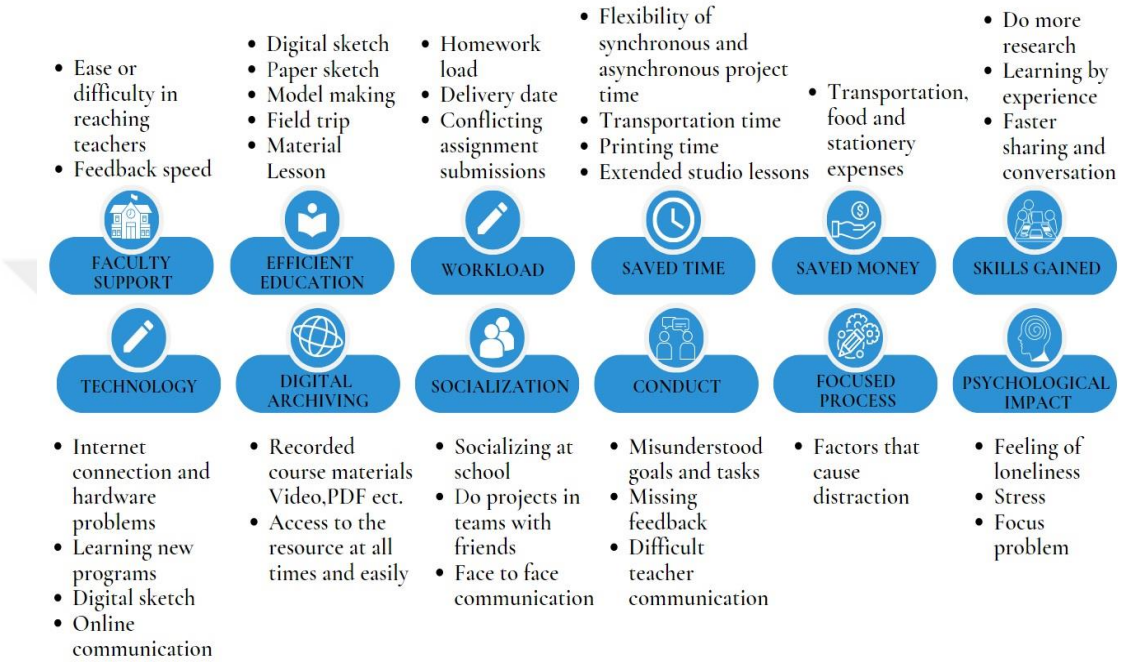


Figure 3.7: Circumstances affecting all five education models

(Bakir et al. 2022)

The hybrid education model is seen as a potential solution that combines the advantages of face-to-face and distance education. In this model, both physical and virtual interaction is provided and synchronous and asynchronous learning approaches are used. However, it can bring its own challenges such as technical issues and cognitive load on students and instructors.

COVID-19 has significantly transformed interior architecture studio education at Çankaya University Department of Interior Architecture. The use of digital presentations and sketches, animations and interactive resources has accelerated instead of traditional methods (blueprint printout, hand drawing, sketch, and model). The pandemic has accelerated the further integration of technology into the education process. Looking to the future, new needs in interior architecture education at Çankaya University Department of Interior Architecture after COVID-19 include: a model that combines face-to-face and virtual experiences. The use of technological infrastructure,

digital platforms and virtual reality technologies in courses is important to create an effective learning environment. Also, more emphasis should be placed on social communication and motivation to adapt to changing educational conditions.

3.6. ÇANKAYA UNIVERSITY EDUCATION PROCESS DURING THE PANDEMIC PERIOD

In line with the Higher Education Council (CoHE) decisions taken to combat the COVID-19 pandemic, Çankaya University switched to the distance education model on March 23, 2020. Thanks to having the necessary infrastructure and organizational competencies, the University was able to successfully and easily overcome this challenging period. In the process of transition, adaptation and implementation of distance education, the Webonline Distance Education (Moodle) system, one of the most widely used systems worldwide, was taken as a basis. This system, which has been used throughout the university for many years, has contributed greatly to the effective implementation of distance education. The experience of faculty members and students with this system and the suitability of the infrastructure played a critical role in the successful implementation of distance education. Nevertheless, a number of support mechanisms and communication platforms have been established for faculty members and Çankaya University students to use this system effectively. In distance education, while lectures were delivered synchronously, resources such as weekly lesson plans and relevant audio-visual course materials were made available for asynchronous support. During the COVID-19 pandemic, within the distance education process determined by the Council of Higher Education (CoHE), practical and theoretical courses at the Faculty of Interior Architecture were conducted with superior quality and success using the distance education model.

3.6.1. Applied Courses

Bernard Tschumi remarked that the practical and theoretical realms of architecture are intertwined by saying, "*If you kill the theory, practice dies*." When the Interior Architecture undergraduate curriculum is examined on the basis of applied courses, it is seen that it includes design studios, computer programs courses, and modular systems courses, building construction and drawing courses. These courses are based on practical skills. Applied courses aim to provide students with real experiences in interior design. Design studios form the backbone of architectural

education and provide students with the opportunity to develop their creative thinking, spatial analysis and the correct use of materials and lighting, and their aesthetic sense. Building construction and drawing courses provide students with the technical knowledge and skills necessary to realize interior design projects. In these courses, it is aimed to enable students to make architectural drawings accurately and clearly and to make their projects applicable by understanding building elements. While computer programs courses teach students how to use various software used in interior design effectively, modular systems course provide important information to design functional and aesthetic furniture and to learn furniture details. In general, a comprehensive education is offered to students with applied courses where theoretical knowledge is transformed into practice. In this way, students acquire the necessary skill to be successful in the professional field when they graduate.

During the COVID-19 pandemic period, there have been differences in the way applied courses are taught in the distance education model. The Introduction to Interior Design course, which is a continuation of the Basic Design course, is based on learning by doing and learning through practice. This course was carried out through studio work, homework, sketch problems and projects. The course, which started with a panel critique approach in formal education, continued online with one-to-one critiques through the 'Zoom' program (Urak et al. 2021: 94).

The second, third and fourth year Interior Design Studio courses and the third year Modular Design course were taught with face-to-face critiques through the 'Zoom' program and students were given studies and assignments to develop their projects. The fourth year Graduation Thesis course was also taught with face-to-face critiques via the 'Zoom' program, students prepared their projects and uploaded them to the 'Webonline' system and the course instructors presented the files containing the critiques to the students via 'Webonline' (Urak et al. 2021: 94).

‘Building Construction and Fundamentals of Materials’ and ‘Design Details and Finish Materials’ courses were conducted synchronously through 'PowerPoint' presentations. Drawing assignments and submissions were developed through online critiques given via the 'Zoom' program and were based on submissions via 'Webonline', similar to the Design Studio courses. In the Computer Applications course, the relevant computer-aided design program was taught synchronously via the 'Zoom' program, providing students with the opportunity to practice and receive critiques simultaneously (Urak et al. 2021: 94).

The information provided above is the best example that shows how the COVID-19 pandemic has changed the way courses are taught in interior architecture education. During the pandemic process, distance education methods have significantly affected the way applied courses are taught. Studio work, critiques and project presentations in traditional classroom environments were carried out through online platforms. Digital tools such as 'Zoom' and 'Webonline' enabled students to communicate and share their projects simultaneously (Urak et al. 2021). This process emphasized the importance of digital skills to interior architecture students and provided them with the ability to adapt to technology-based learning methods. Students reinforced their professional skills by developing, critiquing and presenting their projects in virtual environments.

3.6.2. Theoretical Courses

Theoretical courses in interior architecture education are an important component of interior design education, aiming to teach students the basic concepts and principles of interior design. These courses include a variety of topics such as architecture, design and art history, color theory, lighting, acoustics, sustainable design, material science, environmental psychology and space analysis.

During the COVID-19 pandemic period, all theoretical lectures were conducted online through the 'Zoom' program in the form of face-to-face theoretical lectures. Additional course materials such as lecture notes and visuals were shared with the students through the 'Webonline' distance education system (Urak et al. 2021: 98).

CHAPTER IV

ANALYSIS OF FIVE EDUCATION MODELS EXPERIENCED BY INTERIOR ARCHITECTURE STUDENTS: QUESTIONNAIRE

This study aims to comprehensively analyze the effects of five different educational models experienced during COVID-19 on interior architecture education in the context of design studios. This part of the thesis presents the findings from the surveys conducted to clarify the research questions and confirm the research hypothesis. It also includes information about the types of questionnaires, participant group, data collection process, data collection tools used, data analysis and interpretation. Within the scope of the study, a questionnaire was used as the main data collection tool in order to better analyze the effects of five different education models on interior architecture education during the COVID-19 period and to reveal the advantages and disadvantages of education models. The questionnaires, designed specifically for the research topic, contain questions covering various themes (such as curriculum, communication, education techniques, time and money save, challenges and experiences, efficiency, health problems) related to interior architecture education and aim to collect students' views on interior architecture education and design studio education in accordance with the objectives of the research. The prepared questionnaires contain questions covering various themes related to interior architecture education in accordance with the objectives of the research.

The subject group consists of 4th year interior architecture students who constitute the focus of this study. This group includes students close to graduation in the spring semester 2021/2022, who have experienced five different educational models. These students have the potential to provide richer answers to the research questions as they have more experience with interior architecture studio projects and university education. The data collection process consisted of distributing the questionnaires and collecting the participants' responses. The questionnaires were presented to students through online platforms or face-to-face interviews. During this process, participants were informed about the purpose and importance of the

questionnaires by providing explanatory information. Participants' rights to confidentiality and anonymity were also taken into account and voluntary participation was ensured.

The data obtained were analyzed using qualitative and quantitative methods. Qualitative data were analyzed using appropriate techniques such as content analysis or thematic analysis. Content analysis refers to the systematic and detailed examination of relevant national and international textual or visual data and the analysis and interpretation of meaningful data (Metin and Ünal 2022: 275). In this analysis, text documents, relevant graphics, tables and visuals, and reliable web pages were analyzed. The thematic analysis stage involves coding the data, grouping the codes, identifying themes and sub-themes, naming and documenting the themes. At this stage, useful literature sources were organized as a matrix table using Excel software. Training models and themes were categorized in a systematic way using keywords. Quantitative data were analyzed using statistical methods. The analysis process involved a rigorous examination of the responses from the questionnaires, identifying student trends and drawing conclusions about the advantages and disadvantages of the educational models. This information supports the reliability of the research results.

This study is considered to have the potential to be a resource of great importance for specialization and future studies in the field of interior architecture. The main purpose of the research is to understand the educational experiences of interior architecture students during the COVID-19 pandemic, to evaluate the educational models applied and to create an important resource for future educational strategies.

4.1.EXPERIMENTAL GROUP ANALYSIS

The subject group, which constitutes the focus of this study, consists of 4th year interior architecture students who studied at Çankaya University Department of Interior Architecture and graduated in the spring semester of 2021/2022. Careful selection of the subject group is an important step to ensure the reliability and accuracy of the research. The participants were carefully selected in order to obtain the most accurate and efficient survey results, taking into account factors such as age, class and experience level, knowing that they have current experiences on issues related to interior architecture education. The selected group has experienced all five different education models (old face-to-face, emergency remote, distance, hybrid, and new face-

to-face education) that changed during the COVID-19 pandemic period. Therefore, they have first-hand knowledge and experience of the changing education models during the pandemic. This provides the opportunity to obtain more comprehensive and detailed answers to the research objective. In this way, it is assumed that they will be able to provide a broader perspective to this study investigating the effectiveness of educational models for interior architecture education.

In addition, while determining the subject group, it was taken into consideration that their knowledge and understanding of interior architecture education may be more mature since they are close to graduation. Being final year students, they have more experience in interior design studio projects and university education. This also indicates that they have a more solid theoretical knowledge and awareness of construction, building physics, materials and graphic communication techniques. Furthermore, these students have the ability to use 2D/3D computer programs effectively. Therefore, they have the potential to answer questions about the programs more clearly and to identify or notice deficiencies.

4.2.DATA GATHERING

As a data collection method, two types of questionnaires were applied to Interior Design Studio-VI students coded INAR 402 at Çankaya University, Department of Interior Architecture. Before the questionnaires were prepared, curriculum and archive analyses were conducted at Çankaya University. First, a phenomenological questionnaire was administered and the students' general problems, expectations and issues to be considered were analyzed. The questions asked throughout the questionnaire were designed to identify the differences between the education models, to examine what kind of problems they have in which education model, to analyze their future expectations and to measure the impact of the use of digital equipment on the efficiency of the course. The second questionnaire was a structured online survey. Students answered the survey questions online via Google Forms. Based on the answers of the first questionnaire, a new questionnaire was designed and the general findings of the thesis were based on this questionnaire. The main purpose of both surveys is to understand the educational experiences of interior architecture students during the COVID-19 Pandemic period and to determine the problems they experience regarding interior architecture education and their expectations regarding educational models.

The phenomenological questionnaire was used to understand students' experiences in depth and to identify the differences between interior architecture education models and to understand the issues to be considered. The structured online questionnaire was used to ask more specific questions about the education models based on the data obtained and to analyze the overall findings. The methods of this study were designed and implemented with a scientific approach. The data were rigorously analyzed and evaluated using statistical methods to reach reliable conclusions. The scope of the study was broadened to examine the educational experiences of the students in depth and to make recommendations for interior architecture education.

In both surveys, ethical rules were observed and voluntary participation was taken as a basis. The last survey conducted within the scope of the thesis was found ethically appropriate by the "Çankaya University Science and Engineering Sciences Scientific Research and Publication Ethics Board" with the Ethics Committee Evaluation Report dated July 6, 2022 and numbered 2022/3, and all necessary permissions were obtained from the authorized persons.

4.2.1. Open-Ended Questionnaire for Phenomenological Research

Qualitative research is a method used by many disciplines and includes different approaches. Some of these approaches are called narrative research, theory building, ethnography, case study and phenomenology. The phenomenological approach focuses on phenomena that appear in the consciousness of subjects and examines how objects acquire meanings and are experienced in our consciousness. This method aims to focus on the pure and direct experience of individuals, free from prejudices and assumptions. Phenomenology is a qualitative research method that enables people to express their understanding, feelings, perspectives and perceptions about a particular phenomenon or concept and is used to describe their experiences. The primary goal in phenomenological research is to reach people who have lived and experienced the situation to be researched in depth and to conduct interviews with those who are willing to participate (Tekindal and Uğuz Arsu 2020: 156). After the information obtained from the survey is analyzed, it is converted into specific keywords and then the phenomenon is conceptualized by determining themes and sub-themes. The meaning is enriched by transferring the experiences of the participants in a descriptive way (Yıldırım and Şimşek 2016: 83). Phenomenological research is an

approach that aims to understand human experience multidimensionality. The research process includes the steps of identifying a research problem, writing a purpose statement, creating a research design, identifying participants, generating data, analyzing and presenting the data. This method starts with curiosity about how a person experiences and understands a particular experience and describes the basic meanings and essence of experiences (Tekindal and Uğuz Arsu 2020: 162).

Within the scope of a phenomenological research, a questionnaire consisting of open-ended questions was applied in order to obtain in-depth information about traditional interior architecture department education and students' distance education experiences. The results of the questionnaire were analyzed and a new questionnaire was prepared. Before the questionnaire questions were prepared, a detailed literature review on five different educational models was conducted. This review process was conducted through the most recent scientific articles, conference proceedings, websites and other sources about educational models. The literature review was conducted in order to comprehensively examine the existing research on educational models. During the research, the most common problems and themes related to educational models were identified with special attention. These problems were then used as a basic source for formulating the survey questions. For example, problems encountered in training models, advantages and disadvantages of each training model, improving educational performance, digitalization in teaching and learning processes, user experience were among the themes identified. In addition, before creating the survey questions, we focused on the surveys of similar studies and the data obtained from these surveys. This was done to understand what kind of questions similar studies asked and what kind of answers they received. The analysis of existing questionnaires in the literature provided a useful guide for the construction of the phenomenological questionnaire. The questionnaire process was revised four times under the guidance of the thesis advisors. At each revision stage, the aims of the questionnaire, the clarity and comprehensibility of the questions, the accuracy of the measurement, and the appropriateness of the questionnaire for the purpose of the survey were meticulously evaluated. Both phenomenological and mixed-type questionnaires were created and finalized through a comprehensive literature review, analysis of similar studies and careful revisions. In this way, the questionnaires became a reliable and effective data collection tool in line with the purpose of the thesis.

A total of 30 students participated in the survey. Of these, 18 were female and 12 were male students. The questionnaire was distributed to the students during the design studio course and they were asked to share their experiences during the pandemic period in line with the questions asked.

Within the scope of the questionnaire; the courses that students have the most difficulties in the interior architecture department, distance education process experiences and problems they have experienced in design studio courses, integration of technology into interior architecture education, innovations and expectations that can be made in the interior architecture department, factors that will increase success in design studio courses were analyzed. According to the findings obtained from the research, the courses that the participants had the most difficulties were the Interior Design Studio III and Interior Design Studio IV courses taken especially in the 3rd year. The main reason for these difficulties is that the computer programs used in the courses are not sufficiently learned. Students were also asked how the critiques given in the design studios should be given. A high majority of 95% stated that critiques should be given on a digital screen. According to the results of the survey, it was determined that the majority of the students had a positive opinion about the distance education model. According to the comments of the participants, the students described distance education as positive in many aspects such as listening to the critiques of their friends and developing projects. In addition, it was also stated that the distance education process saves time. Regarding the link between education models and courses, the majority of the participants argued that theoretical courses should be delivered through distance education model and practical courses should be delivered face-to-face.

The students who answered positively about the effect of the use of technology on the relationship between the instructor and the student stated that technology facilitates communication. When the innovations that can be made in interior architecture education were asked in the questionnaire, it was observed that the students mostly wanted to make field trips and to introduce real materials and to explain the materials practically. In the last part, students were asked about their perspectives on virtual reality technologies and they stated that these technologies would contribute to studio education, increase the experience of space, increase communication and understandability, easily recognize mistakes, enrich the learning experience, develop imagination and save money.

The survey results were analyzed and a new questionnaire was designed in accordance with the purpose of the thesis. This questionnaire was prepared to obtain in-depth information about five different education models that changed during the pandemic period.

4.2.2. Structured Online Survey

In this research, the experiences of Çankaya University's 4th year Interior Design Studio students about educational models during the pandemic period were examined. The questionnaire study is mixed type and includes Likert scale type, ranking, classification, multiple choice questions and open-ended questions.

In the first part of the questionnaire, open-ended questions were used to collect the demographic information of the participants to find out their gender, age and years of education at school. Then, a ranking question was asked to measure the devices used in the distance education model, the answers to this question were "Most," "Very Much," "Medium," "Less," "Very Less," and "Never Used".

The questionnaire is followed by multiple-choice questions and the themes are; technical problems experienced in the distance education model, whether the recorded courses are watched again, approaches to the way and methods of conducting the interior design studio course, health problems.

Then, in section B of the questionnaire, the participants were asked to make certain judgements and their level of positive or negative agreement with the given statements was measured by using a 5-point Likert scale, also known as the Single Likert scale. Likert scale is a standardized classification form for studies (QuestionPro 2023). It is a type of questionnaire or measurement tool developed for the measurement of attitudes. After the publication of an article by Rensis Likert in 1932, Likert scales, named after the author's surname, have become one of the most popular types of scales for measuring attitudes and attitude components (feelings, beliefs, behavioral tendencies) (Dursun and Alnıaçık 2019: 149). Attitudes are defined as tendencies to show positive or negative reactions towards a particular object. In Likert scales, respondents are presented with a series of statements and asked to what extent they agree with these statements with certain options. The options on the scale are usually as follows: Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree. These options are intended to determine the direction (positive or negative) and strength of the attitude (Dursun and Alnıaçık 2019: 151). To measure attitudes, a

numerical value is assigned to each alternative answer. Then, a score is determined for each respondent by summing or averaging these numerical values. These scores help to measure the level of the participants regarding a certain attitude (Baka et al. 2012: 247).

In part C of the research, the participants were asked to indicate which education model is appropriate for the given judgements by considering the education and practices of the Interior Design Studio courses. A brief explanation was made about the five education models, and preliminary information about the years and period in which they were implemented was provided. A question was asked about which practices they used more during the COVID-19 pandemic period. Afterwards, participants were presented with certain statements and asked to indicate which education model they thought was appropriate. This section consists of multiple choice questions. The answers were: Old Face-to-Face Education, Emergency Remote Education, Distance Education, Hybrid Education and New Face-to-Face Education.
The last question of the questionnaire was presented as an open-ended question and the participants were asked to express their general thoughts about the applicability of the education models they experienced to the Interior Architecture department. Participants also expressed their suggestions and complaints about the education models in this section. All questions had to be answered and there were no unanswered questions.

4.3. DATA ANALYSIS

In this part of the study, the findings obtained from the survey questions are supported by schematic and bar graphs and explained textually. Graphics were used to visually represent and understand the answers of the participants. Graphics together with textual explanations provided a more understandable and summarized presentation of the research results.

Research findings are given in percentages and numerical data. In the tables and figures below, numerical data are shown with the symbol (n) and percentage frequency values are shown with the symbol (p). Percentage calculations were used to determine the ratio of each response category to total responses. Percentage values were obtained by dividing the numerical data in the relevant cells by the total number of responses.

Percentile Value = (Number of Responses in Specific Category / Total Number of Responses) * 100

Table 4.1: Gender Distribution of Participants

Study Variables	Women		Men	
	n	*p*	*n*	*p*
Variable	27	62,8%	16	37.2%

Table 4.2: Age Distribution of Participants

Study Variables	Total	
	n	*p*
Variable 1 (22)	1	2.3 %
Variable 2 (23)	7	16.3 %
Variable 3 (24)	14	32.5 %
Variable 4 (25)	7	16.3 %
Variable 5 (26)	4	9.3 %
Variable 6 (27)	6	14 %
Variable 7 (28)	3	7 %
Variable 8 (29)	1	2.3 %

The survey was administered to 4th year students graduating in the spring semester of 2021-2022. The research was directed to students who took 402 Interior Design Studio VI course. A total of (n=43) students participated in the survey and (n=2) students did not participate in the survey. According to the research findings; it was observed that female participants were in the majority (n=27) and constituted 62.8% of the survey as a percentage. Male participants (n=16) constitute 37.2% of the survey. (Table 4.1)

When the age distribution of the participants in the questionnaire study was analyzed (Table 4.2), it was seen that 24-year-old participants (n= 14) constituted the highest rate with 32.5%. Following this finding, the participation rate of both 23-year-old (n=7) and 25-year-old (n=7) participants was realized as 16.3%.

Table 4.3: Distribution of participants' Çankaya University education years

Study Variables	Women		Men		Total	
	n	*p*	*n*	*p*	*n*	*p*
2015-2023	-	-	1	2.33%	1	2.33%
2016-2021	3	6.98%	-	-	3	6.98%
2016-2022	4	9.3%	5	11.6%	9	20.93%
2016-2023	-	-	1	2.33%	1	2.33%
2017-2022	13	30.23%	6	13.95%	19	44.19%
2017-2023	1	2.33%	1	2.33%	2	4.65%
2018-2022	5	11.63%	-	-	5	11.6%
2018-2023	1	2.33%	-	-	1	2.33%
2019-2023	-	-	1	2.33%	1	2.33%
2022-2023* *(False answer)*	-	-	1	2.33%	1	2.33%

When the university education years of the participants were analyzed, it was observed that (n=19) students, which constituted a significant majority and represented 44.19 % of the findings, continued their education at Çankaya University between 2017 and 2022. It is thought that within this five-year period, one year was allocated to the Preparatory School, followed by four years of undergraduate education in the Department of Interior Architecture. The study also revealed that another group of nine people, corresponding to 20.93 % of the participants, received their education between 2016 and 2022. Since the survey was conducted in 2022, it is thought that the participants who wrote the year 2023 did not complete the necessary conditions for graduation, had lower courses, and therefore wrote 1 year more for their graduation. These findings shed light on the distribution of the participants' educational background and the specific years in which they completed their education. In line with the results of the analyses, it was observed that male students were more likely to extend their university education than female students.

The participants were asked the question "Which devices did you use in Çankaya University Department of Interior Architecture distance education model and how often?" when the answers given were analyzed, it was found that they mostly used laptops to participate in the lessons (Table 4.4). It was observed that the second device frequently used by students was cell phones. In this research, it was concluded that the

use of desktop computers has decreased with the development of technology, increased functionality (easy transportation to another area) and the decrease in the size of the device. It has been observed that the majority of the students of the Department of Interior Architecture do not prefer to use tablets.

Table 4.4: Analysis of frequency of technological device usage in distance education model

Study Variables *(n)*	Very Often	Often	Sometimes	Rarely	Very Rarely	Not Used
Desktop PC	2	6	-	9	2	24
Laptop	38	1	2	1	-	1
Tablet	2	2	3	12	2	22
Mobile Phone	11	9	12	8	1	2

In this study, the technological problems experienced by 43 participants in the education they received during the pandemic period were analyzed (Table 4.5.). The frequency of encountering various problems such as power outages, internet outages, computer-related problems, Zoom connection problems, sound quality problems, and image quality problems was assessed among the participants. In addition, the demographic information of the participants was also analyzed.

According to the results obtained, it was found that the highest percentage (86.05%) of the participants experienced internet outage problems. Following this result, it was analyzed that (62.79%) users experienced Zoom program connection problems. A majority of the users, which constitutes almost more than half of the users, stated that they experienced computer-related problems (55.81%). The sound quality problem (53.49%) was associated with the Zoom program used to access the courses in the distance education model. The percentage of participants experiencing this problem is also considerably high. According to the results of the image quality problem associated with the same program; (n=14) people with a percentage of (32.56%) stated that they had a problem. The number of participants who stated that they experienced power cuts was (n=17), with a percentage of 39.53% among the problems. Only (n=3) out of (n=43) participants (6.98%) stated that they did not experience any problems.

Table 4.5: Analysis of technical problems in distance education model

Study Variables	Women		Men		Total	
	n	*p*	*n*	*p*	*n*	*p*
Electricity Outage	8	18.6%	9	20.93%	17	39.53%
Internet Outage	23	53.49%	14	32.56%	37	86.05%
Computer-related Problems	14	32.56%	10	23.26%	24	55.81%
Zoom Connection Problem	16	37.21%	11	25.58%	27	62.79%
Sound Quality Problem	15	34.88%	8	18.6%	23	53.49%
Image Quality Problem	8	18.6%	6	13.95%	14	32.56%
I didn't have any problems.	2	4.65%	1	2.33%	3	6.98%

Regarding the gender factor, 53.49% of women experienced internet outages compared to 32.56% of men. While the rate of women experiencing sound quality problems is 34.88%, this rate is 18.6% for men. On the other hand, while the rate of men experiencing computer-related problems is 23.26%, this rate is 32.56% for women. Based on these data, it can be said that the gender factor is related to technological problems and there are some differences. For example, women are slightly more likely to experience internet outages and sound quality problems, while men are more likely to encounter computer-related problems. However, as a result of this study, a definite causal relationship between gender factor and technological problems cannot be determined. More comprehensive studies may be needed and other variables may need to be considered.

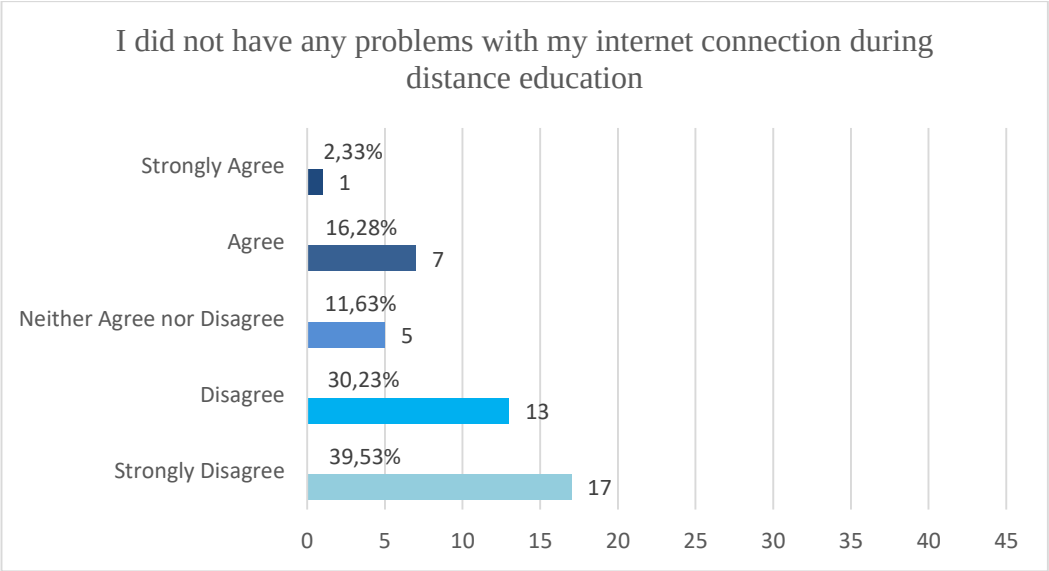


Figure 4.1: Internet connection problem analysis given in number and percentages.

The same result was obtained in the Likert scale type question about the internet-related problems of the participants. As a result of the answers given to the statement "I did not have any problems with my internet connection during distance education", it was observed that the majority of the participants in the survey had problems with internet connection." Of the participants in the survey, (n=17, 39.53%) strongly disagree, (n=13, 30.23%) disagree, (n=5, 11.63%) neither agree nor disagree, and (n=7, 16.28%) agree. Only (n=1, 2.33%) participant gave the answer of strongly agree.

These results show that internet connection problems are a common problem in the distance education process in general. Having a reliable internet connection for students to continue their education is an important factor for an effective distance education experience. Internet connection problems can cause negative effects such as students' inability to attend their classes, difficulties in accessing course materials, and lack of communication.

These findings emphasize the importance of measures to be taken in planning and implementing the distance education process. Educational institutions and governments should take the necessary steps to provide students with appropriate internet infrastructure and technical support. Since internet connectivity problems in the distance education process can have negative effects on the quality of education and success of students, it is important to approach this issue with care.

Table 4.6: Analysis of the review and usefulness of course materials

Study Variables	Total	
	n	*p*
Yes, it was helpful to do it again.	13	30.23%
Yes, but it was not helpful.	5	11.63%
No, I didn't watch the lectures again.	20	46.51%
Course records have never been shared.*	5	11.63%

The students were asked, "Did you watch the courses recorded in Çankaya University Department of Interior Architecture distance education model again later? If yes, was it useful?" question was asked. The aim of including this question in the survey was to examine the extent to which students engage in re-watching and revisiting lessons within the context of distance education. Çankaya University, through its Webonline application, has provided various resources such as course materials, exam results, and additional information related to the courses. This application were made to support students' learning experiences and provide them with convenient access to course-related content.

When the answers given to the questionnaire question were analyzed, it was seen that (n=20, 46.51%) participants marked the statement "No, I didn't watch the lectures again." (n=13, 30.23%) participants marked the statement "Yes, it was helpful to do it again." (n=5, 11.63%) participants marked the statement "Yes, but it was not helpful." (n=5, 11.63%) participants stated that course materials were not shared at all. In conclusion, the majority of the respondents did not feel the need to watch the lectures again and this group constituted almost half of the total respondents. However, there was a significant number of respondents who found it useful to watch the lectures again. The number of respondents who chose the other option is limited. These results emphasize that course content should be shared specifically for each course and that a certain proportion of students will want to repeat the course. Providing an opportunity to watch the course materials again may help students to better understand the lessons and reinforce the content.

Interior architecture design studio courses proceed within the framework of a set programming from the beginning of the project. From the first weeks, students are introduced to the space they will be working in and are provided with materials such as documents, architectural drawing files, pictures and location information. Goals and

expectations for the project are set, which may be related to increasing the functionality of the space. At this stage, the intended use of the project, conceptual preferences and areas of student responsibility are identified. For example, a space may be given and students are expected to transform it into an event center.

In the first weeks, students collect sample data by examining event centers around the world and build knowledge by conducting research on the topic. In this phase, students analyze the context of the project, functional requirements and user needs. They also try to understand the physical characteristics of the space and the space flow chart given by the tutors, which will be studied throughout the semester. These phases are all about getting to know the space and designing. In the next stage, the technical dimension of interior architecture comes into play. Students create a concept and start to draw the space functionally as an architectural project. Architectural plans and sections are presented to the tutors and critiqued, so that the space begins to form in a functional way. Students present their concepts throughout the semester using architectural drawings, sketches, visual references, 3D drawings and material samples. They revise the project several times with the help of the instructors and try to create functional, functional and ergonomic spaces in terms of interior architecture. In the development phase of the selected concept, students elaborate the design using detailed architectural drawings, plans, sections and 3D modeling. At this stage, scale drawings, technical details and visual documentation are created for the feasibility and functionality of the design. In the final stage of the design process, students present the design concept and details. Presentations are supported by drawings, renderings, 3D visuals and presentation materials. At this stage, students' design skills, communication skills and presentation skills are evaluated.

The design process described above is directly related to the questions asked throughout the survey and the judgment statements presented to the students.

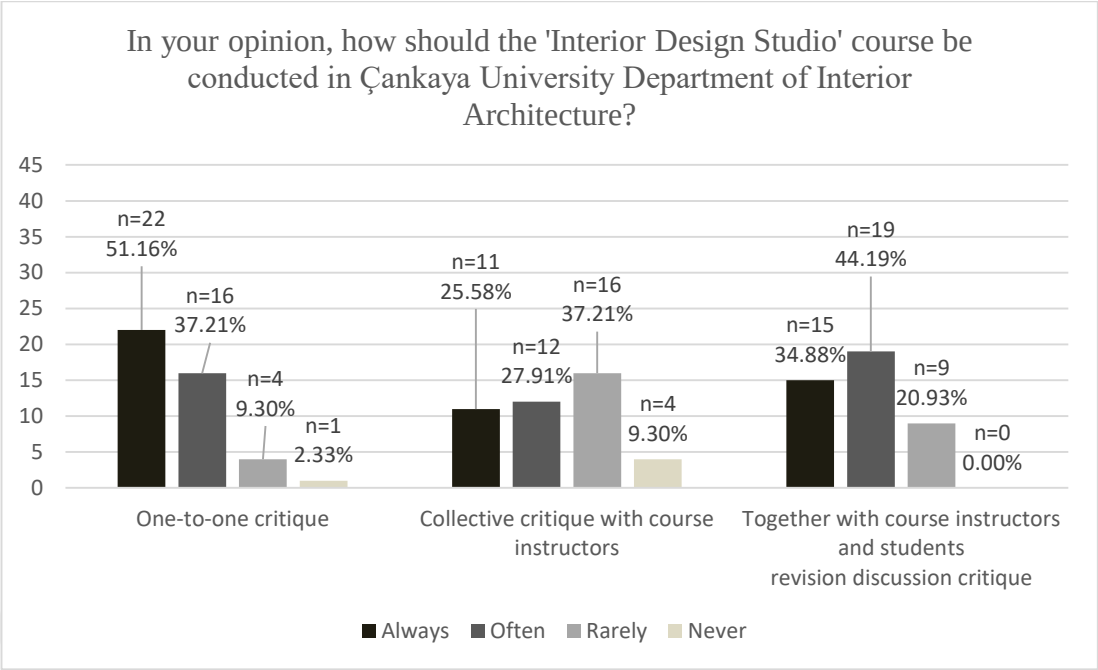


Figure 4.2: Analysis of the method Çankaya University Department of Interior Architecture 'Interior Design Studio' course is conducted

In the table, study variables are categorized according to gender groups. The columns 'Always', 'Often', 'Rarely', and 'Never' represent the frequency of each study variable within each group.

The study variables are further categorized based on the type of critical analysis in design studio courses: one-to-one critique, collective criticism with course instructor's critique, and revision discussion criticism with course instructors and students. In design studios, students receiving criticism from instructors ensures the healthy and correct progress of their projects. Controversial criticism received with instructors and students is believed to help students follow their peers' projects, identify their own shortcomings through project comments, and make revisions. This survey question aims to analyze whether students prefer participating in individualized sparring with instructors or interpreting instructor feedback collaboratively with peers. The majority of the participants always (n=22, 51.16%) or often (n=16, 37.21%) preferred the "one-to-one critique" method. Only a small number rarely (n=4, 9.30%) or never (n=1, 2.33%) used this method. "Collective critique with course instructors" method has a more balanced preference distribution. About half of the participants preferred this method often (n=12, 27.91%) or rarely (n=16, 37.21%). However, (n=11, 25.58%) of the participants always used this method and (n=4, 9.30%) never

preferred it. "Together with course instructors and students revision discussion critique" method seems to be the most preferred method among the participants. While (n=15, 34.88%) of the participants always prefer this method, (n=19, 44.19%) use it often, (n=9, 20.93%) of the participants rarely prefer this method.

When all the responses to this questionnaire question are examined, the findings show that the participants primarily prefer to receive one-to-one critique. The second preferred way of conducting the course is discussion critique with the instructor and students. As a result, considering that students have different preferences when receiving criticism, it is important to adapt the methods of criticism for better selection for student use.

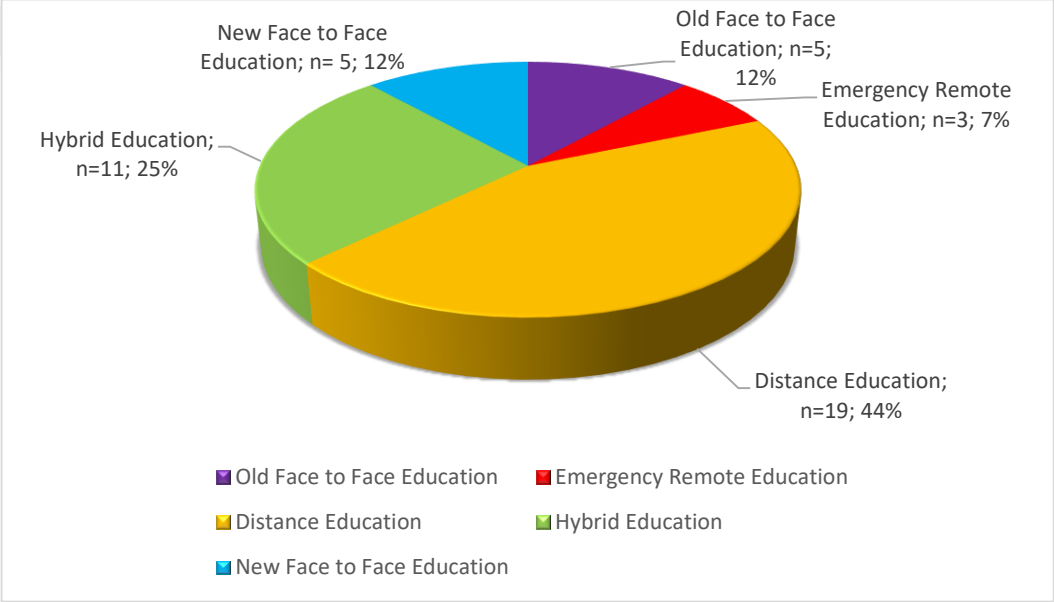


Figure 4.3: Analysis of the educational models preferred by the students in the critical taking and project revision processes given number and percentages

In the design studios, critiques are given by the instructors for the development and evaluation of interior design projects. The critiques in the interior design studio play an important role in advancing, evaluating and communicating the project design. The critiques help to bring together different perspectives between the instructors and the students, leading to better designs. When designing their projects, students sometimes make similar mistakes in the same areas. In this case, students' revising their own projects by listening to their peers' critiques allows for a faster project process and a more comprehensive evaluation of the project from different perspectives.

In relation to this, the participants were presented with the statement "By listening to another student's critique, I realized the mistakes in my own project more easily and revised it." and it was tried to determine in which education model this judgment was more frequent. According to the results of the questionnaire; students who prefer distance education model (n=19) constitute the majority with a rate of 44.18 %. Hybrid education (n=11, 25.58%) was the second most preferred option. The old face-to-face education (n=5, 11.63%) and the new face-to-face education (n=5, 11.63%) options were preferred equally and by fewer participants. The least preferred option was the Emergency remote education model (n=3, 6.98%).

According to the findings obtained from this question, it is seen that students take into account the criticisms made to their friends' projects more in the distance education model and develop their own projects. The number of students who want face-to-face interaction is not small. Since partial face-to-face interaction is provided in the hybrid education model, closer interaction between students and instructors and real-time criticism seem to be more likely.

When the correlation between the previous question (Figure 4.2) and this question (Figure 4.3) is established, it is seen that in Çankaya University Department of Interior Architecture, "Together with course instructors and students revision discussion critique" method should be used. Because it is clearly seen in the answers given to this question that students also follow the projects of their peers and make revisions in their own projects by taking into account the criticisms received, and that they also care about face-to-face communication. It is thought that success will increase even more when this course method is applied in the hybrid education model.

The participants were asked the question "Which methods should be used to make the 'Interior Space Design Studio' courses more efficient in Çankaya University Department of Interior Architecture?" According to the answers received, the participants preferred the "digital critical method" with the highest rate (n=37, 86.05%). (n=32, 74.42 %) participants stated that they wanted to receive "face-to-face education" with a high rate (Table 4.7).

Table 4.7: Analysis of preferred methods in design studio course

Study Variables	*n*	*P*
Face-to-Face Education	32	74.42 %
Sharing of Subject Course Videos	17	39.53 %
Sharing Digital Course Files (PDF/PPT)	25	58.14 %
Instructor - Student Interactive Method	29	67.44 %
Criticism via Sheet Drawing	24	55.81 %
Criticism via Digital Drawing	37	86.05 %
Making Area /Field Trip	33	76.74 %
Using VR (Virtual Reality) Glasses	9	20.93 %
Making 3D Drawings	32	74.42 %
Making Models	13	30.23 %
Real Material Demonstration	33	76.74 %
Giving In-Studio Studies	15	34.88 %
Giving Homework	11	25.58 %

These two data from Table 4.7 do not fully support the previous findings. Figure 4.2 concludes that interior design studio students most prefer to receive one-to-one critiques and it is thought that this type of critique is more likely to be realized through face-to-face education or hybrid education models. Figure 4.3 shows that students realize their mistakes faster in the distance education model and correct their own mistakes by listening to project critiques. The correlation analysis between the three related questions (Table 4.7, Figure 4.2 and Figure 4.3) revealed that interior design studio students both attach great importance to face-to-face education and revise more easily in the distance education model. In addition, it was determined that they would like to receive criticism through digital methods. While their preference for both the distance education model and the digital critique method shows the importance they attach to digitalization, it has been observed that they also need face-to-face interaction. These results clearly reveal the differences in the educational model and critique preferences of students studying interior architecture, the need to emphasize learning diversity, the need to consider individual needs and the importance of technological competencies in interaction. The fact that students have various learning styles leads some to prefer face-to-face interaction while others find distance education more effective. In this context, a flexible educational model that meets a variety of student needs may be a necessary approach to achieve more successful outcomes in interior architecture education.

The participants (n=33, 76.74 %) stated that "making a field trip" would help the design studios to be more productive. What is meant by a field trip is that students have the opportunity to physically examine the spaces they will design. Again (n=33, 76.74 %) participants argued that the introduction of real materials would provide an effective education in design studios. This approach is of great importance for a successful professional life. These data (digital critique, field trip and material presentation) also support the phenomenological survey conducted previously. (n=29, 67.44 %) chose the instructor-student interactive method. This data also confirms the findings obtained in Figure 4.2. When the answers received are analyzed, it is seen that students give importance to face-to-face education, but they want to use technology more (Figure 4.5), to visit interior design project areas and to get to know the materials that are important in the profession more. According to the responses, the least preferred method (n=9, 20.93 %) was the use of VR glasses. It is also clearly seen in the survey data that students do not want to do homework and models.

As in every question, "other" option is included in this question. S1 is related to the subject; He stated that everything necessary was written as his own interpretation. S2 is a women participant and her response to the question; ‘I think the shortcomings of these issues are very serious. I do not think that architectural education is an education that will only be processed in the studio.’ S3 is; ‘While the computers allocated by the school for architecture students are very insufficient... I mean, does the school allocate a budget for a more specific support technology such as VR, while the school does not allocate a budget for computers? I think it would be very useful if it does.’ He commented. Each answer given to the "other" option constitutes a (n=1, 2.3%) percentile.

Based on the results of this analysis, it was found that the participants mostly experienced backache and eyestrain (n=36, 83.72 %). The percentages of health problems such as headaches, focusing problems and sleep disorders are also considerably higher and it is seen that students frequently experience them. Other health problems, obesity, nausea, psychological disorders and having no health problems are lower. In addition, (n=1, 2.33%) participants stated that they experienced these health problems even when there was face-to-face education.

Table 4.8: Analysis of psychological or physical health problems experienced by students in the distance education model

Study Variables	*n*	*p*
Backache	36	83.72%
Headache	27	62.79%
Nausea	12	27.91%
Eyestrain	36	83.72%
Focus Problem	24	55.81%
Obesity	5	11.63%
Sleeping disorder	21	48.84%
Psychological Disorders	18	41.86%
I did not experience any health problems.	1	2.33 %
I have had jaw pain problems.*	1	2.33 %
I experienced all of these even when there was face-to-face education.*	1	2.33 %

The questions asked in the second part (Part B) of the questionnaire are related to technology and course satisfaction. These questions were designed in accordance with a 5-point Likert scale. The answers are (Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree and Strongly Agree). Participants indicated their level of compliance with the judgments by thinking about Çankaya University Department of Interior Architecture 'Interior Design Studio' courses.

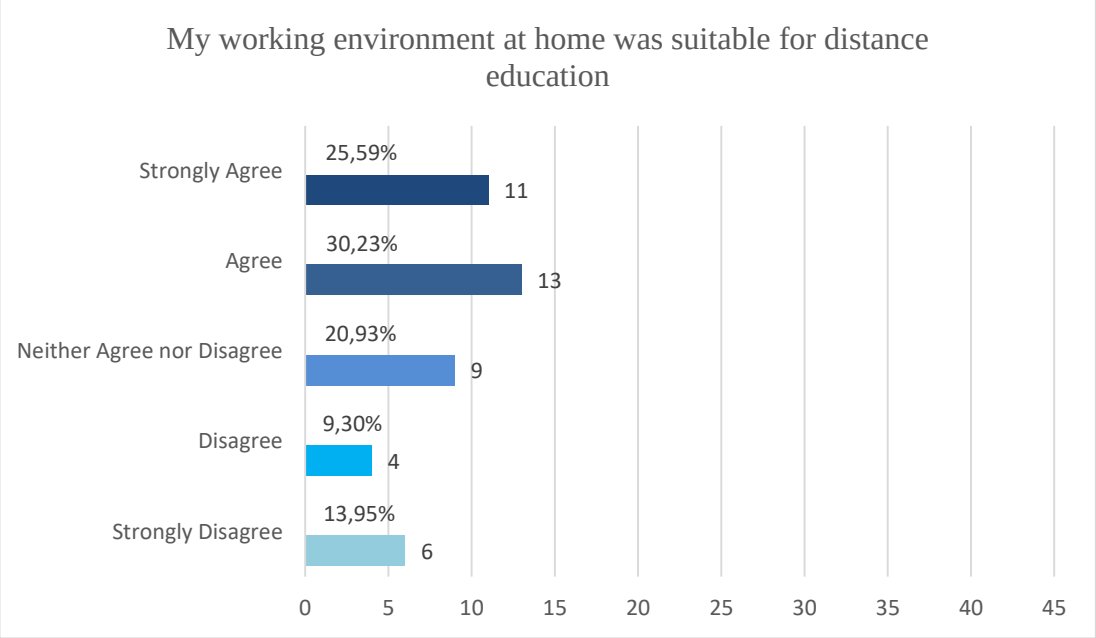


Figure 4.4: Satisfaction analysis of working environment conditions

When the answers given to the statement "My working environment at home was suitable for distance education" were analyzed, it was found that the majority of

the participants' home conditions were suitable for education." While 30.23% of the participants in the questionnaire gave the answer "Agree", 25.59% gave the answer "I strongly agree". According to these results, the majority of the participants think that the working environment at home is suitable for distance education. 20.93% of the participants marked neither agree nor disagree. The number of the respondents who answered disagree: (n=4) participants representing a percentage of 9.30%. The (n=6) participants who answered strongly disagree constitute a percentage of 13.95%.

These findings show that Çankaya University Department of Interior Architecture students have a suitable working environment at home during the distance education process. Having a quiet and organized study area at home and being able to concentrate on their lessons without being disturbed by other family members can help them maintain a good study discipline and focus on their lessons. At the same time, the availability of the necessary technological equipment and infrastructure at home and a reliable internet connection are important criteria for an effective distance education experience. In addition to providing a suitable study environment in students' homes, educational institutions should also provide support to students. Measures such as assistance with technical problems, online availability of course materials, and open communication channels between instructor and student can support students to be successful in the distance education process.

In conclusion, the findings of the survey show that the majority of the participants think that the working environment at home is suitable for distance education. This is an important factor for students to have a successful distance education experience. However, these results suggest that other challenges in the distance learning process should also be taken into consideration and we should keep in mind that the individual needs of each student may differ.

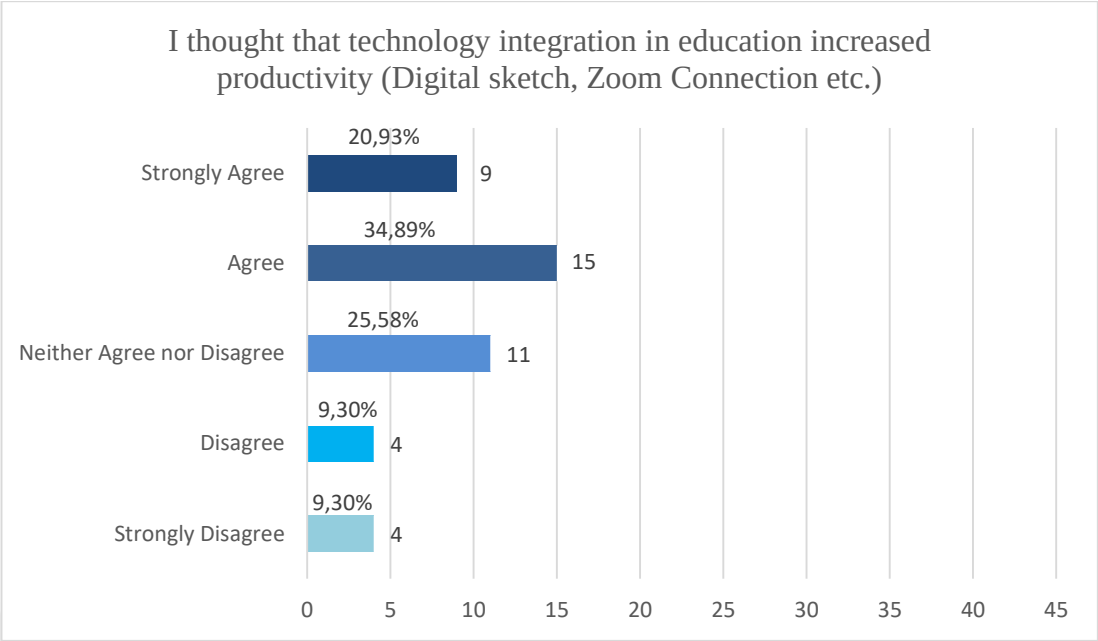


Figure 4.5: Analysis of the effect of technology integration on productivity

When the answers given by the participants regarding the idea that technology integration in education increases efficiency were analyzed, it was observed that (n=43) participants had different opinions. While there were (n=4, 9.30%) participants who strongly disagreed with this judgment, there were also (n=4, 9.30%) participants who disagreed. There were (n=11, 25.58%) participants who neither agreed nor disagreed. Those who agree that technology integration in education increases productivity have the highest rate with (n=15, 34.89 %) participants. However, there are (n=9, 20.93%) participants who strongly agree. In the light of these findings, it is seen that there are differences among the participants regarding the effects of technology integration in education. While some participants believe that technology integration increases educational efficiency, others stated that they do not have a clear opinion on this issue. These differences emphasize the need to consider the advantages and disadvantages of technology use in educational processes. Further research in this area and effective optimization of technology use in educational processes can contribute to more efficient results in education.

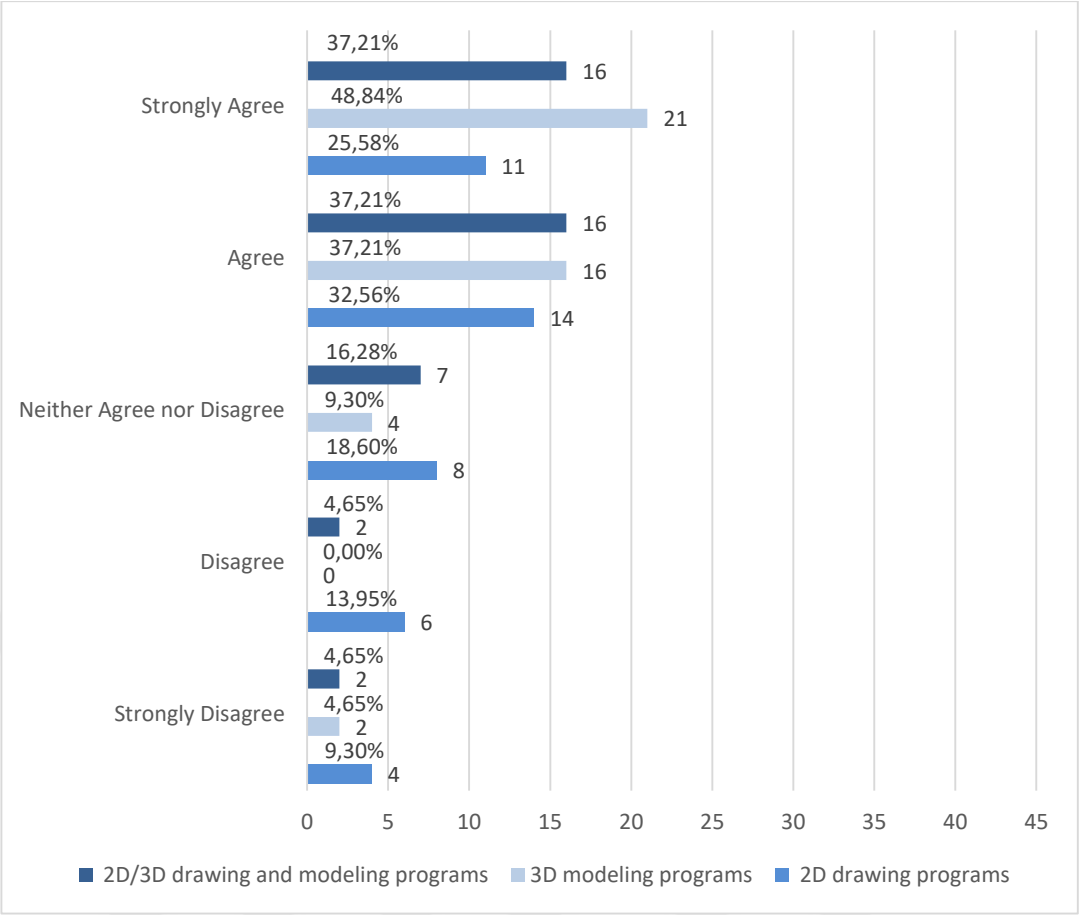


Figure 4.6: Analysis of the effect of 2D and 3D drawing programs on space design

2D drawing programs are technological tools widely used in architectural space design projects. These programs are used by architects, interior designers, graphic designers, engineers and other design professionals, enabling them to make drawings on paper using traditional methods in a digital environment. This allows them to achieve more professional-looking results. These programs, also known as computer-aided design (CAD) software, allow users to make more accurate and error-free drawings, create detailed plans and easily place different elements in the project, and design the space functionally by seeing the finest detail. It also offers advantages such as ease of editing and revision and easy sharing. Such software facilitates the design process while saving time and cost. Furthermore, digital storage and easy sharing of drawings increases collaboration and communication.

A few questions related to these programs were asked to the participants throughout the survey. When the answers to the statement "I thought that I did better space design when I used 2D drawing programs." were analyzed, it was observed that 43 participants had different opinions. While there were (n=4, 9.30%) participants who

strongly disagreed with this statement, there were also (n=6, 13.95%) participants who disagreed. Another (n=8, 18.60%) participants who neither agreed nor disagreed represent another segment. The highest rate of agreement was given by (n=14, 32.57%) participants. There were also (n=11, 25.58%) participants who strongly agreed. According to the findings obtained from the participants, the use of 2D drawing programs provides great help and efficiency in space design.

3D modeling programs are technological tools widely used in space design and visualization processes. These programs are used by architects, interior designers, industrial designers, game developers and other design professionals to create complex spaces in three dimensions. These programs have the ability to create realistic and detailed 3D models in a virtual environment using computer-aided design (CAD) techniques. Through the programs, users can simulate the structure, functionality, lighting, colors, materials and other important details of the space. It offers the possibility to easily manage details such as creating complex geometries, defining material properties, applying lighting and shading effects. 3D modeling programs allow designers to better understand and visualize spaces. These programs play an important role in the process of quickly designing ideas, evaluating different design options and visually communicating them to clients or stakeholders. Using 3D modeling programs, designers can create a digital representation of real-world spaces and examine the space from different angles. These programs increase efficiency in the design process and reduce the margin of error. In this way, it becomes possible to design more impressive, functional and aesthetic spaces.

When the answers given to the statement "I thought I perceived the space better when I used 3D modeling programs (structure, functionality, light, color, material, etc.)" are examined, it is clearly seen that the opinions of (n=43) participants are gathered under a positive roof. While there are (n=21, 48.84%) participants who strongly agree, there are 16 participants (37.21%) who agree. Another segment is represented by (n=4, 9.30%) participants who neither agree nor disagree. Only (n=2, 4.65%) of the participants preferred the strongly disagree response.

These findings suggest that 3D modeling programs can play an effective role in improving the perception of space. The majority of the participants think that these programs help them to better understand elements such as structure, functionality, light, color, material, etc. This emphasizes the importance of visualization in the

process of space design and shows the advantages of 3D modeling technology for designers.

The data of (n=43) participants who participated in the survey conducted within the scope of the research were analyzed for the statement "I was able to receive criticism in an understandable way through 2D/3D drawing and modeling programs." In this context, the distribution of the participants was determined as follows: Strongly Disagree: (n=2) participants (4.65%), Disagree: (n=2) participants (4.65%), Neither Agree nor Disagree: (n=7) respondents (16.28%), Agree: (n=16) respondents (37.21%), Strongly Agree: (n=16) respondents (37.21%).

These findings reveal that 3D modeling programs make a positive contribution to improving the perception of space and that a significant majority of the respondents share this opinion. In conclusion, based on the available data, the effects of 3D modeling programs on improving the perception of space have been examined and it has been concluded that the majority of the respondents believe that using these programs has a positive effect on better perception of space.

When the data of the three graphs given are correlated (Figure 4.6), it shows that the participants generally think that they achieve better results in space design by using 3D modelling programs. This shows that the participants are able to perceive the space better and evaluate the structural, functional, lighting, color and material elements more effectively with 3D modelling. In addition, most of the participants think that they achieve clear and understandable results in space design by using 2D and 3D programs.

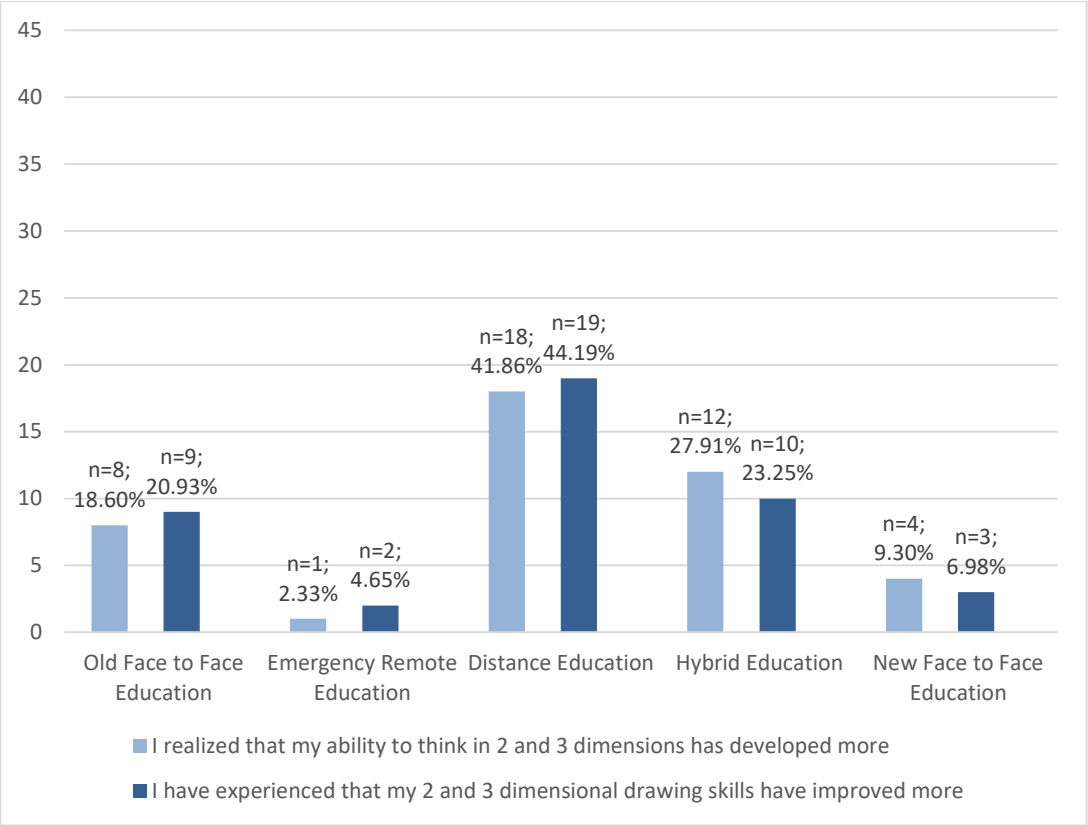


Figure 4.7: Interior Architecture Students' 2D and 3D thinking and drawing skill Development by Education Models

In order to produce successful projects in the design process, interior architecture students should develop the ability to think in 2 and 3 dimensions from the first grade. Because in this way, the ability to imagine and understand spaces and objects in three dimensions is formed. While creating their projects, interior architects have to make designs that are suitable for ergonomics and the correct use of scale, apart from the aesthetics and functionality of the spaces. Spaces should be evaluated and visualized in accordance with these parameters.

In order to analyze in which education model this ability develops better, the participants were asked the statement "I realized that my ability to think in 2 and 3 dimensions has developed more." According to the results of the questionnaire, the distance education model (n=18) was chosen by the students with a high rate of 41.86%. The second preferred option was the Hybrid education model (n=12) and constituted 27.91% of the participants. The old face-to-face education model (n=8) and the new face-to-face education model (n=4) were preferred by the participants. The least preferred education model was the Emergency Remote education model

(n=1). When the results of this statement are analyzed, it was found that students' ability to think in 2 and 3 dimensions developed more in the distance education model. Thinking and drawing are different skills used to express different concepts in the design process. Thinking is a mental process and involves analyzing a design problem, generating ideas, generating alternative solutions and determining the overall concept and formation of the project. Drawing, on the other hand, is a physical act and expresses thoughts graphically or visually. In the field of interior architecture, drawings include plans, sections, lighting and material details and other technical details.

In parallel with the previous option, the participants were presented with the statement "I have experienced that my 2 and 3 dimensional drawing skills have improved more." and it was tried to determine in which education model this has improved more. According to the results of the questionnaire; participants preferred the Distance Education model with a rate of 44.19%. Secondly, the Hybrid Education model (n=10) was preferred by the participants and has a rate of 23.26%. Close to these rates, it is observed that the old face-to-face education model is also preferred in the third place. (n=9) of the participants preferred this model and had a rate of 20.93%. The new face-to-face education model (n=2) and the emergency remote education model (n=2) were preferred by the participants.

The finding derived from this statement shows that while distance education is preferred to a great extent, students also need face-to-face interaction for the development of 2D and 3D drawing skills. The fact that the participants prefer both hybrid and old face-to-face education model may indicate that they care about face-to-face interaction.

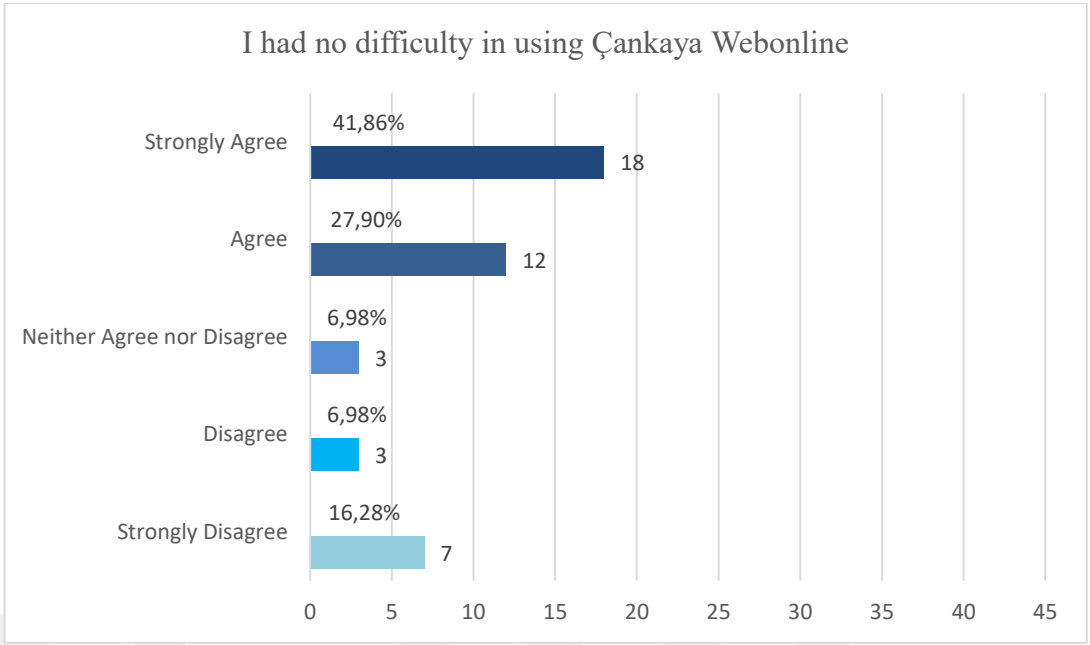
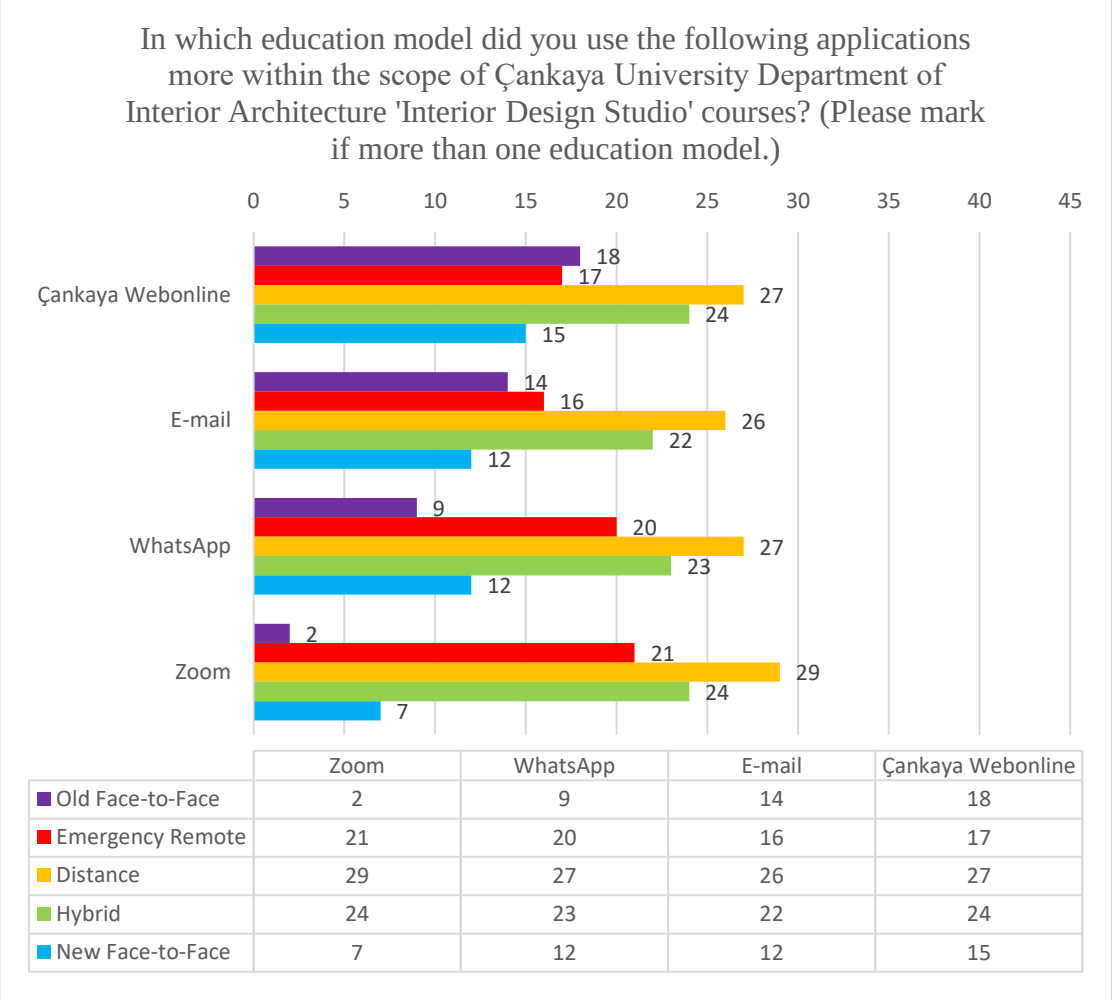


Figure 4.8: Çankaya Webonline ease of use analysis

Çankaya University has developed an application that enables students to easily access course materials, exchange course materials and share notes between students and instructors. This application is actively used by both academic staff and students. This application, which was used intensively especially during the COVID-19 pandemic, has been of great importance in the distance education process. However, it continues to be used during face-to-face education periods. This application supports the learning process by enabling students to participate more effectively in classes and have quick access to academic materials. This application, which increases cooperation and communication among the university community, aims to improve the quality of education by strengthening student-instructor interaction.

(n=18, 41.86%) of the participants strongly agreed, (n=12, 27.9%) agreed and stated that they had no difficulty in using Çankaya Webonline. (n=3, 6.98%) participants answered neither agree nor disagree. (n=7, 16.28%) participants stated that they had difficulty in using the program and answered strongly disagree, while (n=3, 6.98%) participants answered disagree. According to the findings obtained from this survey question, it is concluded that the majority of the participants do not have difficulty in using Çankaya Webonline. It is recommended to simplify the user interface for respondents who gave negative answers.

In section 3 (Part C) of the questionnaire, questions were asked about the five education models that the participants had experienced. The participants were given certain judgments about interior architecture education and design studio education, and it was tried to determine which education model is more suitable for these judgments and provides more efficiency. In this way, an analysis was carried out to determine the most appropriate educational model for interior architecture education and design studio education by taking the opinions of the participants about five different educational models (old face-to-face, emergency remote, distance, hybrid, and new face-to-face education) they have experienced. The results of the research will contribute to the design of the education model in a way that will provide the most benefit to the student and increase the effectiveness of the education programs.



	Zoom	WhatsApp	E-mail	Çankaya Webonline
Old Face-to-Face	2	9	14	18
Emergency Remote	21	20	16	17
Distance	29	27	26	27
Hybrid	24	23	22	24
New Face-to-Face	7	12	12	15

Figure 4.9: Graphic of the applications used within the scope of Çankaya University Department of Interior Architecture 'Interior Design Studio' courses according to education models

The aim of this survey question is to determine in which educational models students prefer different communication and course collaboration tools more within the scope of Çankaya University "Interior Design Studio" courses. This information has the potential to be an important guide in revising educational models and determining communication strategies.

The table shows five different educational models (Face-to-Face Education, Emergency Remote Education, Distance Education, Hybrid Education, and New Face-to-Face Education) and four different communication tools (Çankaya Webonline, E-mail, WhatsApp, Zoom) used in these models. In each education model, which communication tool students preferred more was calculated with numerical data.

According to the findings, in the former face-to-face education model, Çankaya Webonline was the most used communication tool by the students. The results show that Çankaya Webonline platform (n=18) is used intensively for accessing course materials and providing general information in an environment where face-to-face interactive courses are held in interior design studio education. E-mail (n=14) was the second most common communication tool preferred by students for course-related communication and file sharing. WhatsApp (n=9) and Zoom (n=2) applications were less preferred communication tools. The Zoom application emerged when the pandemic entered our lives. The WhatsApp application enabled students to communicate with their peers at that time.

In the emergency remote education model, Zoom was the most preferred communication tool (n=21). This result shows that when students had to switch to distance education in an emergency, they utilized Zoom's features of attending live classes and video communication to communicate effectively. WhatsApp (n=20) stands out as the second most preferred application. With the onset of the pandemic, it is observed that students used WhatsApp to communicate with each other during the uncertainty period. Instructors also preferred WhatsApp to communicate with students until both the government and the university have established a full schedule. Çankaya Webonline (n=17) was the third most preferred application. With a close ratio, students stated that they communicate using e-mail (n=16).

The 'Distance Education' model, like the 'Emergency Remote Education' model, shows that students mostly use Zoom (n=29) application. Thanks to this application, which started to be widely used with the COVID-19 pandemic, education

was not interrupted and access to the course was provided from anywhere with an internet connection. This application, which can be used from both mobile phones and computers or tablets, has played an important role during the pandemic. Çankaya Webonline and WhatsApp (n=27) were the second most used and equally preferred applications by students in the distance education model. Çankaya Webonline provides students with easy access to course materials, class attendance times and general information about the courses thanks to its features. WhatsApp, on the other hand, allows students to communicate with their peers and instructors via instant messages. Students reported not attending the class or not being able to access the link as messages through this application.

E-mail was a widely used communication tool in all education models. Students prefer e-mail to communicate with instructors and other students, to share files and to exchange information. In the distance education model, this preference is (n=26).

In the hybrid education model, students' most preferred communication tools are Çankaya Webonline (n=24) and Zoom (n=24). This result shows that Çankaya Webonline is an important communication tool in the hybrid education environment where students both participate in face-to-face interactive courses and access online materials. E-mail (n=22) and WhatsApp (n=23) are the other preferred communication tools of the students. An important finding is that students use all communication tools almost equally in the hybrid education model. This is evident from the fact that the numerical values in the data are close to each other. This shows that students meet their communication needs through different means and that each means of communication has a specific role.

In the new face-to-face education model, the most preferred communication tool of the students was Çankaya Webonline (n=15). This result shows that students need access to online platforms even when they switch to face-to-face education. E-mail and WhatsApp (n=12) had equal usage, and Zoom (n=7) was the least preferred communication tool. This data is in line with the old face-to-face education model. It was observed that the use of WhatsApp increased slightly more.

When the research findings are examined in general, it is seen that the use of Zoom and WhatsApp programs is high in emergency remote education, distance education and hybrid education models that offer distance education opportunities. Çankaya Webonline is used effectively in all education models. Although it is seen

that students use e-mail mostly in distance education models, it is found that e-mail is used in all education models in general.

These results show that students use different tools in each education model to meet their communication needs. The use of communication tools differs in face-to-face or distance education models. The findings from this question can be a valuable guide for more effective planning and implementation of the educational processes of the Department of Interior Architecture. The selection and use of communication tools can provide a more efficient learning experience by increasing student-instructor interaction.

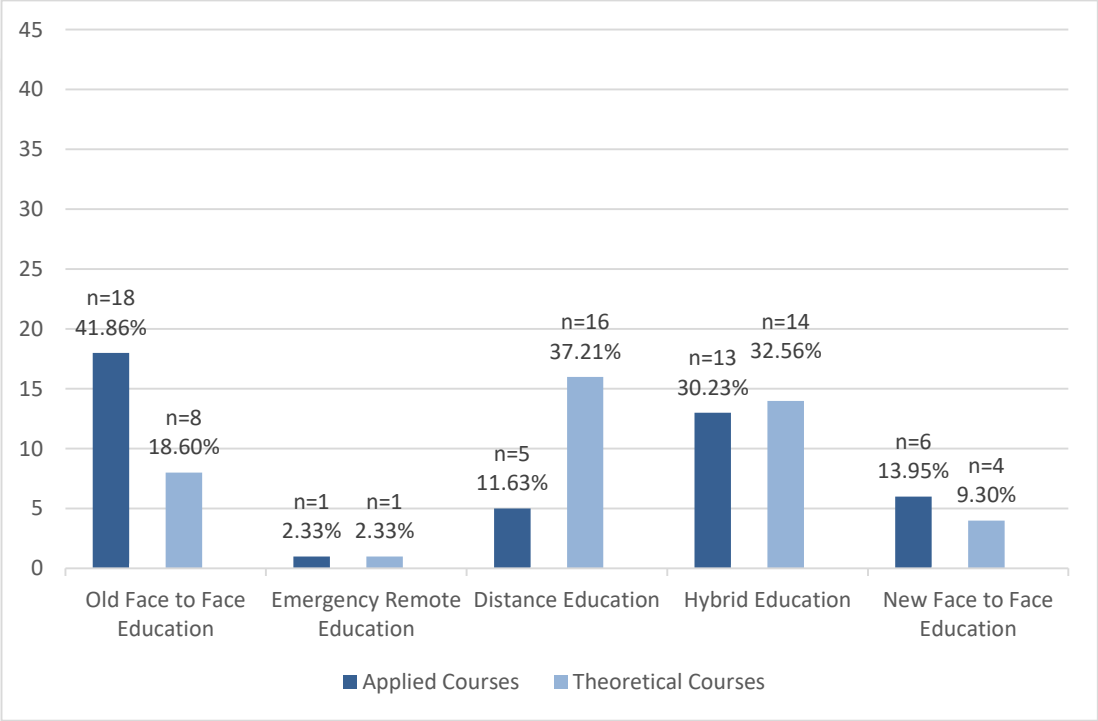


Figure 4.10: Analysis of preferred education models for applied and theoretical courses

Within the scope of the satisfaction analysis of the educational models of the survey, students were given various statements and were asked to indicate which educational model was more appropriate for Design Studio Courses.

The first judgment given is as follows: "I thought it was more suitable for applied courses." Looking at the answers given to this judgment, it was determined that students preferred the Old Face-to-Face education model the most (n=18). The second most preferred education model was Hybrid Education (n=13). While the number of students who preferred the New Face-to-Face education model was

determined as (n=6), the number of students who preferred the Distance education model was (n=5). According to the survey results, the least preferred education model was Emergency Remote Education (n=1). Based on this data, it is concluded that students prefer face-to-face interaction in applied courses.

From an academic point of view, the findings based on the survey results provide important guidance in the selection of educational models for Design Studios courses. Students' preference for face-to-face interaction in applied courses indicates that they value the hands-on nature of these courses and the importance of one-to-one interaction. This information suggests that more emphasis should be placed on face-to-face interactive teaching methods in the teaching of Design Studios. In addition, it should be taken into account that the Hybrid Education model is also preferred by students and courses should be planned and implemented by taking into account the advantages and disadvantages of this model. Based on student feedback, student satisfaction and effective learning experience should be considered in the design and development of educational models.

According to the results of the survey conducted for the theoretical courses, the findings obtained regarding the education models preferred by the students are as follows: Distance education model was preferred by (n=16) students. This shows that students mostly prefer to follow the theoretical courses with remote access and online resources. This model offers students the advantages of flexibility in location and time saving. Considering that theoretical lectures are generally focused on presentations and lectures, it was found that students do not need to come to the campus.

The hybrid education model ranked second and was preferred by (n=14) students. This model involves face-to-face interactive lectures being held by coming to the campus in certain periods and making use of online resources at other times. The students' preference for this model reflects both their desire to benefit from face-to-face interaction and the advantage of flexibility. This model of education saves both time and money. Students also have the opportunity to socialize with their peers.

The number of students who preferred the old face-to-face education model is (n=8). This reflects the fact that theoretical lessons are taught in the traditional classroom environment and students value one-to-one interaction. The number of students who preferred the new face-to-face education model was fourth. This model aims to realize theoretical lessons in classroom environments designed with innovative approaches. The students' preference for this model shows that they support an

approach that encourages active participation in the lessons and uses innovative learning methods. The emergency remote education model was preferred by (n=1) student. This shows that distance education model is not preferred for theoretical courses except in emergencies.

Based on these findings, it is an important result that students prefer the distance education model for theoretical courses. These preferences of the students indicate that theoretical courses are generally individual study and content-oriented. In addition, it is seen that the hybrid education model is also a common preference among students and should be taken into consideration. This model can be attractive to students in terms of providing both a face-to-face interactive environment and flexibility and access to online resources. It also allows students to socialize with their friends by coming to campus on certain weeks. It also helps them to save money, not only on travel time, but also on things like stationery and food costs. The old face-to-face model and the new face-to-face model were the least preferred options. These findings suggest that distance education models should be more widely used in the teaching of theoretical courses and that the hybrid education approach should also be considered.

In conclusion; it is seen that students prefer face-to-face education model in applied courses such as design studios. On the other hand, it is understood that students prefer the distance education model in theoretical courses. The hybrid education model is applicable for both practical and theoretical courses.

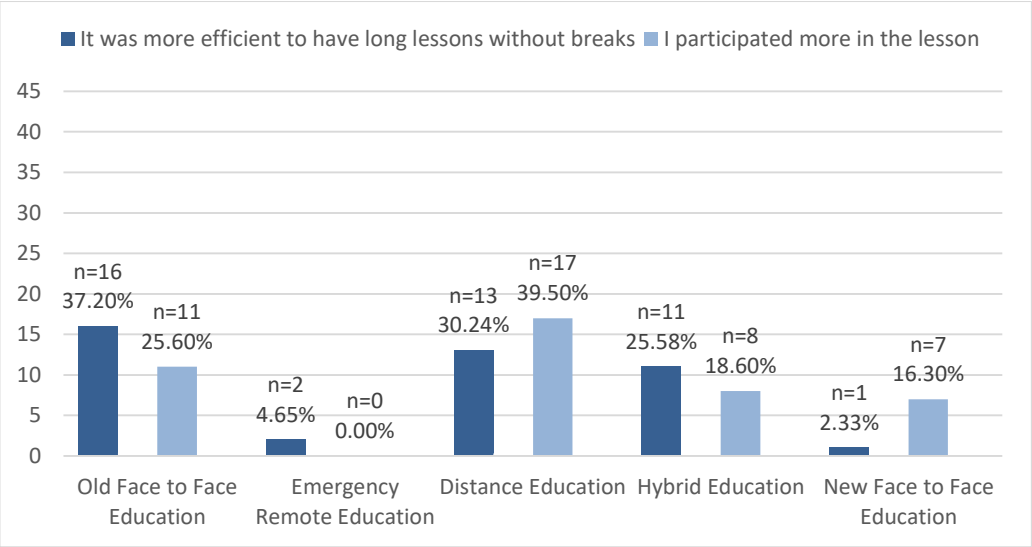


Figure 4.11: Distribution of block courses and participation rate according to education models

According to the answers we obtained when we directed the judgment "It was more efficient to have long lessons without breaks" to the students, it was found that the students mostly preferred the new face-to-face education model (n=16). This result shows that the students think that face-to-face interaction classroom environments where long-term lessons are held without a break are more efficient. It is thought that design studio courses are generally long and students have the opportunity to go out of the studio during this time, which makes the lessons more productive and boredom-free. These findings also show that long-term and uninterrupted work in design studio courses is preferred by students. This preference of the students can be associated with the opportunity to work in depth and concentrate in the studio environment. It is thought that long-term courses are more effective in terms of developing design skills, conducting 2D and 3D project-based studies, and being able to easily reach the instructors when needed and receiving instant criticism.

In the distance education model (n=13), students stated that long-term courses without a break were efficient. This shows that intensive and uninterrupted lessons can attract students' interest and attention well in distance education environment. In the Zoom application, students have the opportunity to turn off the camera for a short time when they need it and return to the lesson. They also have the opportunity to receive instant feedback from the instructors. It is thought that they chose the distance education model option because of the advantage of this situation.

Participants; in the third place, they preferred the hybrid education model (n=11). In this model, students can have a richer learning experience by combining studio courses with in-class and out-of-class experiences. Emergency remote education model (n=2) and new face-to-face education model (n=1) are among the least preferred models. These results indicate that students do not prefer distance education or innovative face-to-face education approaches except in emergencies.

Students' preference for the old face-to-face education model raises a question to understand the difference between it and the new face-to-face education model. To investigate the answer to this question, the differences between the old and new face-to-face education models should be taken into account and the factors affecting students' preferences should be examined.

Participants were asked a judgment that measures their level of participation in design studio courses in different education models. This evaluation aims to determine in which education model students are more active and participate more. As a result of

the responses obtained, it was observed that the distance education model (n=17) had the highest participation rate. This result is thought to be based on factors such as the spatial flexibility of the distance education model, the ability of students to access the course from wherever they want and the lack of transportation problems. The second most preferred education model is the old face-to-face education (n=11). The rate of students who prefer this model is 25.60%. The number of those who prefer the hybrid education model (n=8) and the new face-to-face education model (n=7) are close to each other. As an important point, it should be noted that none of the participants preferred emergency remote education.

These findings show that some basic factors are effective in the educational model preferences of interior architecture students. The most preferred distance education model can be explained by the fact that students prefer to benefit from spatial flexibility and the opportunity to access the courses from wherever they want. In addition, the lack of concerns about transportation problems is also seen as a factor that makes distance education attractive.

The second preference for traditional face-to-face education indicates that some students still find the advantages of this model valuable. These students are likely to emphasize elements such as one-to-one interaction, instant critiques and workshops. The similar number of students choosing the hybrid model and the new face-to-face model may reflect students' openness to new experiences and adaptation to changing educational models. The students' choice of these models may be motivated by the possibility of partial physical participation in the courses and their desire to utilize the technological advantages of virtual learning environments.

The analysis of the education model preferences of interior architecture students (Figure 4.11) shows that they tend to think that "Face-to-face education" and "Distance education" processes are more productive than long continuous courses and they tend to participate more actively in the courses. This result shows that these two education models support students' learning processes and function effectively. Participants in the "hybrid education" process, on the other hand, although they adopted the ideas about long continuous lessons, their participation in the lessons seems to be lower compared to other education methods. The data on "Emergency remote education" and "New face-to-face education" show that these education models are not preferred in general evaluations.

Distance education and the old face-to-face education models offer different advantages to students. These advantages should be taken into account when comparing both models of education. The distance learning model offers students savings in time and expenses. Instead of attending a physical classroom, students can attend classes at their own location. This gives students flexibility of space and can allow time lost in transportation to campus to be used for studying. It also provides an opportunity to use technology more effectively because they can easily access course materials and resources through online platforms. It also allows students to learn at their own pace. It is an environmentally friendly education model as the amount of environmental waste is less.

On the other hand, the traditional structure of the old face-to-face education model does not cause adaptation difficulties for students because it is pre-planned and structured. Students' class schedules and class times are set and regular, which helps students to establish their daily routines more easily. Socialization with peers on campus. In physical classrooms, students can come together to work in groups. This allows them to develop collaboration and communication skills. It also provides instant feedback between instructors and students. Face-to-face education can make students' learning experience more personal and interactive.

In conclusion, both models of education have their advantages and can be chosen depending on students' needs and preferences. Distance learning is characterized by factors such as flexibility of time and space, while face-to-face learning emphasizes elements such as social interaction and quick feedback. By considering these advantages, students can choose the education model and ensure long-term participation in the courses. It is necessary to investigate why they do not want to be taught for a long time while participating in the new face-to-face education model.

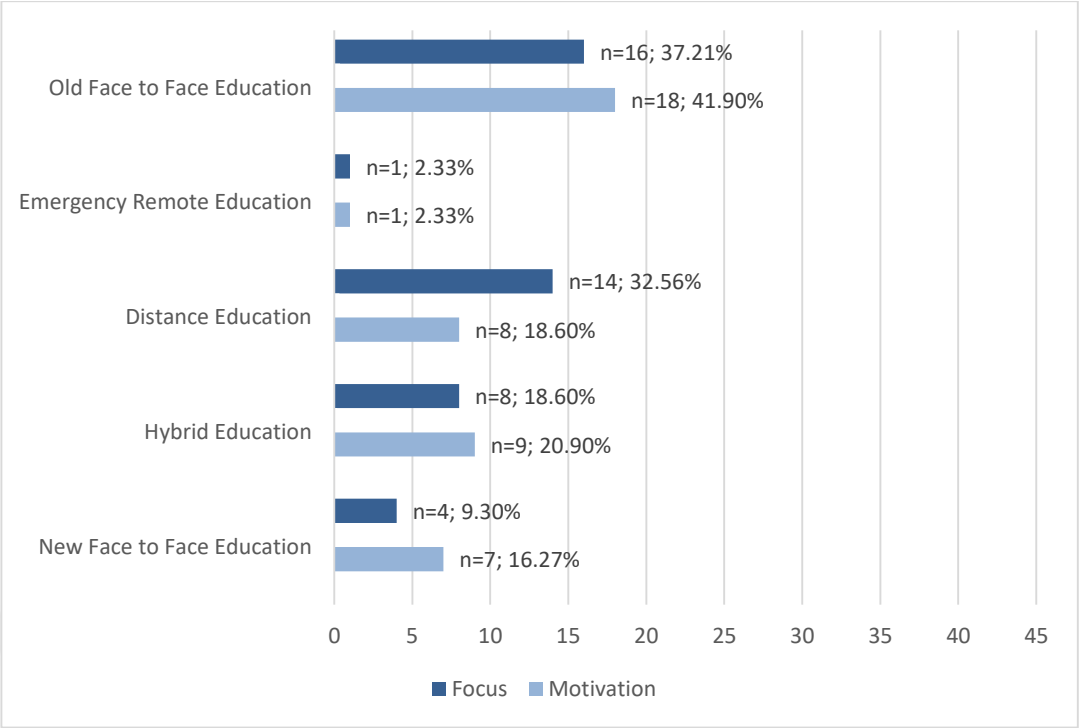


Figure 4.12: Analysis of students' focusing and motivation on the according to the education models

Focus is an important element in the process of quality learning. Being able to focus more on the lesson refers to the ability of students to pay attention to the lesson, understand the content, transfer it to others and actively participate in the learning process. Active participation includes activities such as asking questions to the instructors, taking notes, and participating in discussions. Having few distractions during the lesson (factors such as phones, social media, noisy) also facilitates focusing. The participants were asked a judgment aiming to measure in which education model they could focus more on the lesson. According to the results of this question, the participants' level of focusing on the lesson according to different education models was calculated as frequency percentages. The focusing level of (n=16) participants who experienced the old face-to-face education model was determined as 37.21%. This shows that students with the old face-to-face education model have a high level of focus on the lessons. It was observed that (n=14) participants preferred the distance education model. The focus level of these participants was calculated as 32.56%. It was found that the data of the old face-to-face education and distance education were very close to each other. The reason for this may be the adaptation to the education models used for a long time and the psychological unwillingness to change. The level

of focusing on the lesson of (n=8) participants who preferred the hybrid education model was determined as 18.60%. The focus level of the (n=4) participants who preferred the new face-to-face education model was calculated as 9.30%. The fact that the new face-to-face education model was preferred by fewer participants and the focus level was lower than the other models suggests that this model may not yet be fully accepted among students. The emergency remote education model was preferred by only (n=1) participant and the level of focus of this participant was calculated as 2.33%. This result is an indication that since 2020, the focus has been gradually decreasing with each transition to a different education model. It is recommended to investigate in detail the reason why students focus more in the old face-to-face education model and have focusing problems in the new face-to-face education model, even though they are in the same physical space and with the same individuals. It is thought that constantly trying a new education model makes adaptation difficult and negatively affects focus.

The survey participants were asked the statement "I felt happier and more motivated when I started the lessons." and were asked in which education model they felt this more. According to the findings of the research; 41.90% (n=18) of the participants preferred the old face-to-face education model with a very high rate. Hybrid education (n=9) was in second place with a rate of 20.90%. Distance education (n=8) and new face-to-face education (n=7) options were also selected at close rates. The least preferred education model was Emergency remote education (n=1).

When the two graphs are correlated and motivation and focusing data are analyzed (Figure 4.12), it is seen that a parallel approach is followed. In other words, when students are highly motivated, they focus more. In this context, the old face-to-face education model can be considered as the best education model option in terms of keeping students' motivation high and enabling them to focus on the lessons. However, a more comprehensive research and data analysis may be required to fully confirm this conclusion. The advantages and disadvantages of different educational models should be taken into account in order to improve the educational processes and increase the success of students.

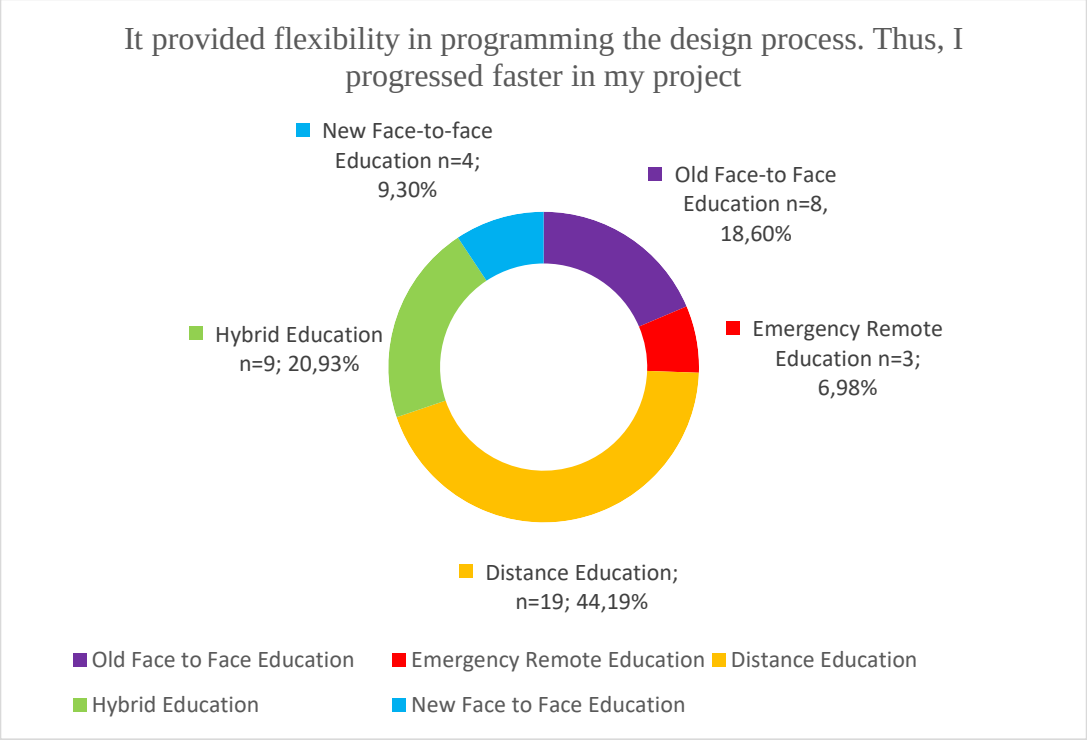


Figure 4.13: Analysis of the relationship between design process program flexibility and progress in projects according to educational models

Survey participants were presented with the statement "It provided flexibility in programming the design process. Thus, I progressed faster in my project." statement was presented. Considering the answers given to this statement, it was determined that the majority of the students (44.19%, n=19) preferred the distance education model. This data can be evaluated as the opportunity to spend more time on courses in the distance education model compared to the time spent traveling to and from the campus in traditional education. The second most preferred option is the hybrid education model (n=9) with a rate of 20.93%. A similar proportion of students preferred the old face-to-face education model (n=8). This data also shows that students need a campus environment. The new face-to-face education model (n=4) and the emergency remote education model (n=3) were the least preferred options. The findings from the survey question show a tendency that students' progress faster in projects in the distance education model.

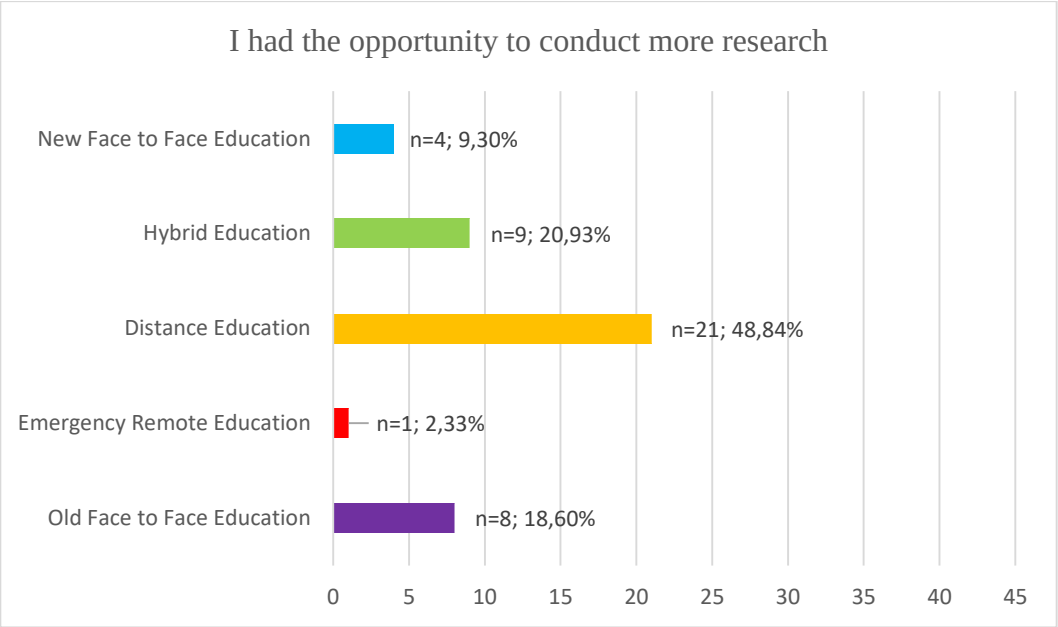


Figure 4.14: Analysis of doing more research according to students' education models

In order to find out in which education model the students conducted more research, the statement "I had the opportunity to conduct more research." was asked. The findings confirm the previous question. 48.84% (n=21) of the participants stated that they conducted more research in the distance education model. The response rates for hybrid education and old face-to-face education models are close to each other. While there are (n=8) students who prefer the old face-to-face education model, there are (n=9) students who prefer hybrid education. New face-to-face education model (n=4) and emergency remote education model (n=1) are the least preferred answers.

The need for students to do more research is a fundamental requirement in the design process. Research is important for students to understand spaces, identify functional requirements, analyze user needs and create concepts. In short, doing research helps students develop their design skills and approach their projects in a more comprehensive way. According to the findings of the research, it was observed that they did this best in the distance education model. Since the results are in parallel with the previous judgment, they confirm each other.

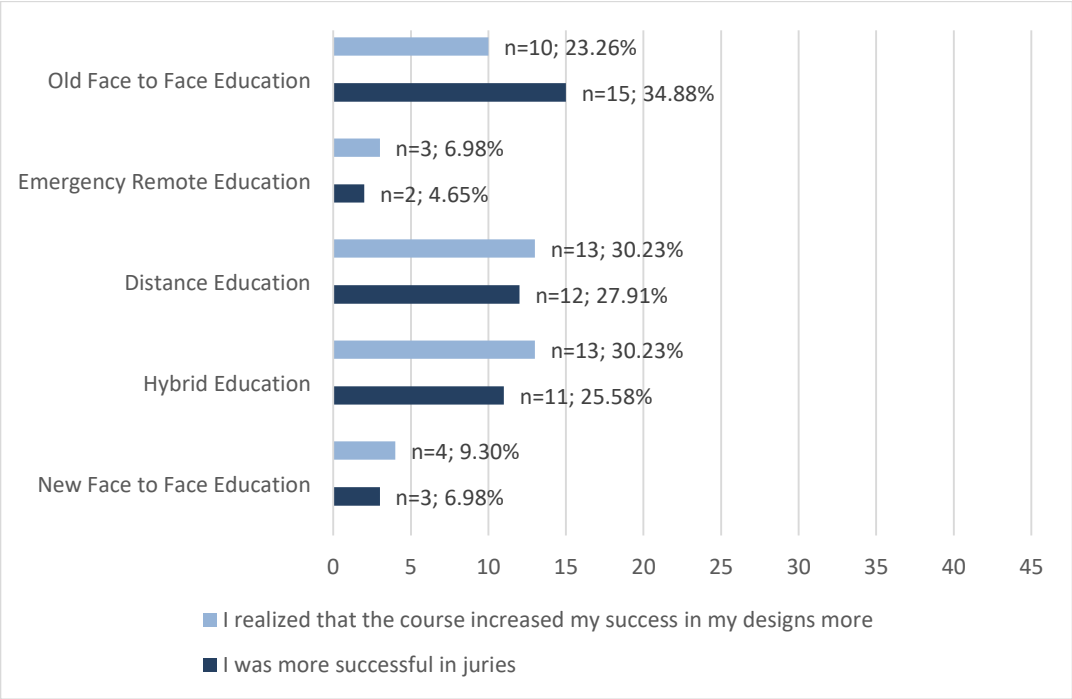


Figure 4.15: Examining the effect of education models on design success and the success rate of participants in juries according to education models

In order to determine in which education model the students were more successful, the statement "I realized that the course increased my success in my designs more." was asked. According to the research data, it is seen that the participants chose Distance Education (n=13) and Hybrid Education (n=13) models with the highest preference rate (30.23%). The old Face-to-Face Education (n=10) option has a rate close to the first preferred models. The New Face-to-Face Education (n=4) model was less preferred. Emergency Remote Education (n=3) is the least preferred education model (6.98%). According to the results of this study, despite students' tendency to prefer distance education, it is clear that they also want to interact face-to-face. This finding emphasizes the importance of face-to-face interactions rather than only distance communication in students' educational process. It is estimated that students consider the advantages of face-to-face interactions as enriching their learning experience, strengthening social interactions and providing deeper learning. This situation reveals the importance of educational institutions taking measures to support face-to-face interactions as well as distance education programs. It is important to emphasize that success in design is based on the master-apprentice relationship and that the more often feedback is received, the faster and more accurately the project is developed. This relationship not only allows students to improve their skills with

guidance and critiques from an experienced designer, but also provides an opportunity for students to benefit from the experience of the instructors and share knowledge. The critiques received support the early detection of errors, making improvements and achieving a successful outcome at every stage of the design process.

The participants were presented with the judgment "I was more successful in juries" in the design studio courses." According to the findings obtained from the research results; (n=15) students stated that they were more successful in juries in the old face-to-face education model with a rate of 34.88%. The second choice of the participants was the distance education model (n=12) with a rate of 27.91%. The hybrid education model was selected by (n=11) users and constituted 25.58% of the participants. The least successful education models were new face-to-face education (n=3) and emergency remote education (n=2). According to the research results obtained, the participants' responses to this statement differ from the previous statements. Although the students stated that they were more successful and focused more in the distance education model, in this judgment, they stated that their success in juries was higher in the old face-to-face education model. This difference reveals the need for further research on the reasons for this difference.

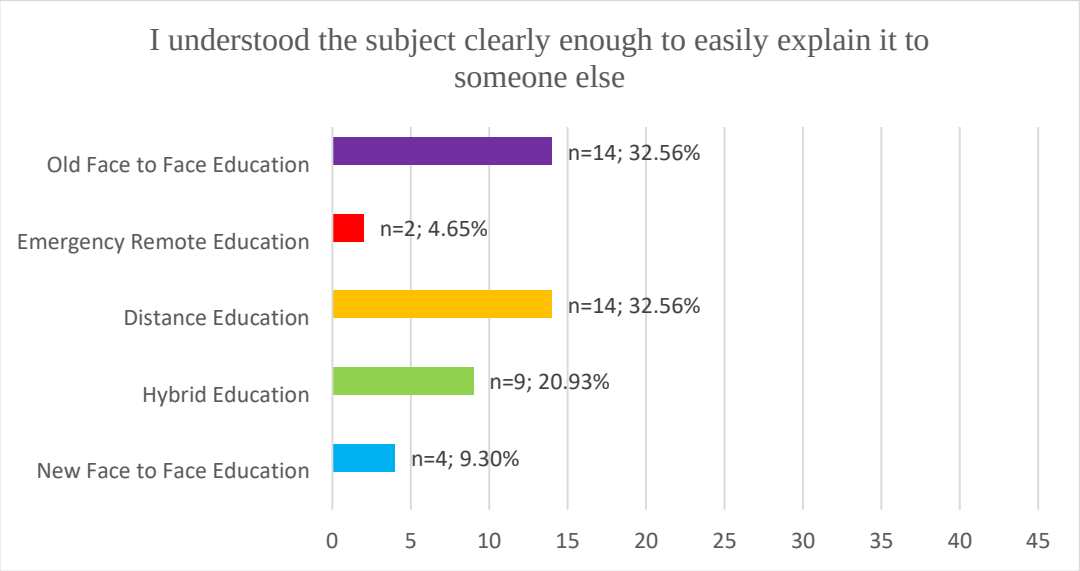


Figure 4.16: Understandability analysis according to education models

The best way to analyze whether one has clearly understood a piece of information is to be able to easily convey it to someone else. In order to analyze this, the participants were presented with the statement "I understood the subject clearly

enough to easily explain it to someone else." When the responses obtained were analyzed; the old face-to-face education model (n=14) and distance education model (n=14) were equally preferred. Based on this data, it was observed that 32.56% of the participants preferred these two education models. The number of participants who preferred the hybrid education model was (n=9). New face-to-face education (n=4) and emergency remote education (n=2) models were less preferred. According to the results of the study, students stated that the subjects they understood most clearly were in distance education and old face-to-face education models. The fact that the participants stated that they understood the subject more clearly in these two education models shows that they think that these models are more effective in terms of information transmission and learning processes.

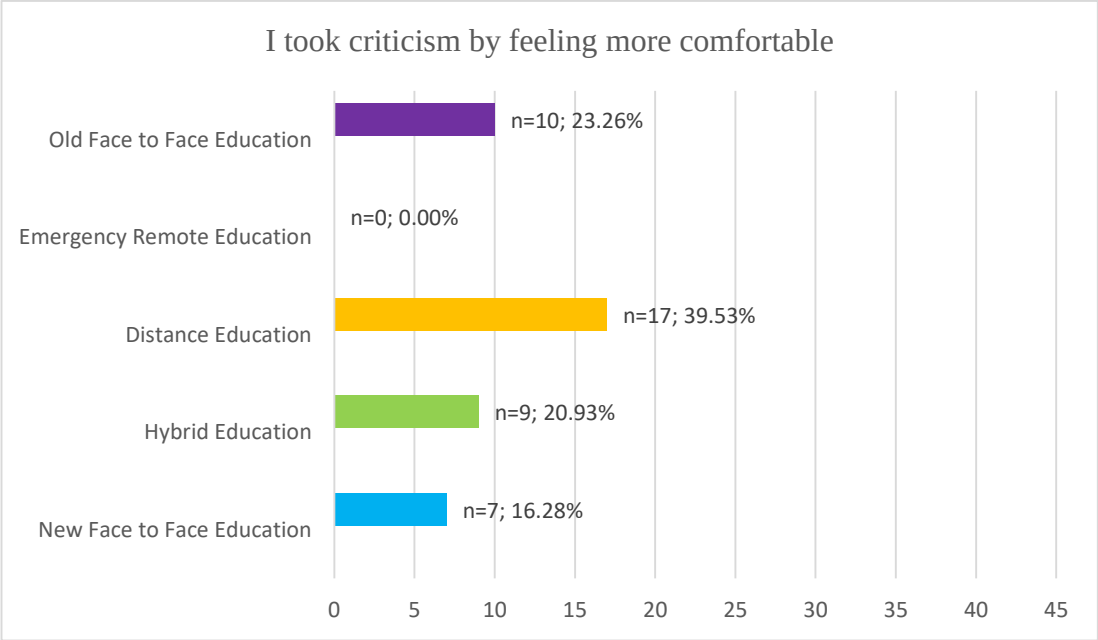


Figure 4.17: Analysis of critical taking by feeling more comfortable with education models

The psychological comfort of students has a critical impact on the educational process. When they feel comfortable, their self-confidence increases, their stress levels decrease and they gain the ability to express their design projects more effectively. This, in turn, tends to lead to more successful outcomes. Students who are under stress often struggle to express their thoughts accurately, while those who are relaxed communicate better and are able to present their design projects more effectively. A more relaxed mind helps new and innovative ideas to emerge. In addition, their communication skills improve and their ability to collaborate is positively enhanced.

Participants were presented with the statement "I took criticism by feeling more comfortable" in the design studio courses. In the responses, the most preferred education model was the distance education model (n=17) with a rate of 39.53%. The second preferred education model is the old face-to-face education model with a rate of 23.26% (n=10). Hybrid education was preferred by (n=9) participants with a rate of 20.93%, while the new face-to-face education model was preferred by (n=7). No participant preferred the emergency remote education program. According to the results of the research, students stated that they felt more psychologically comfortable in the distance education model.

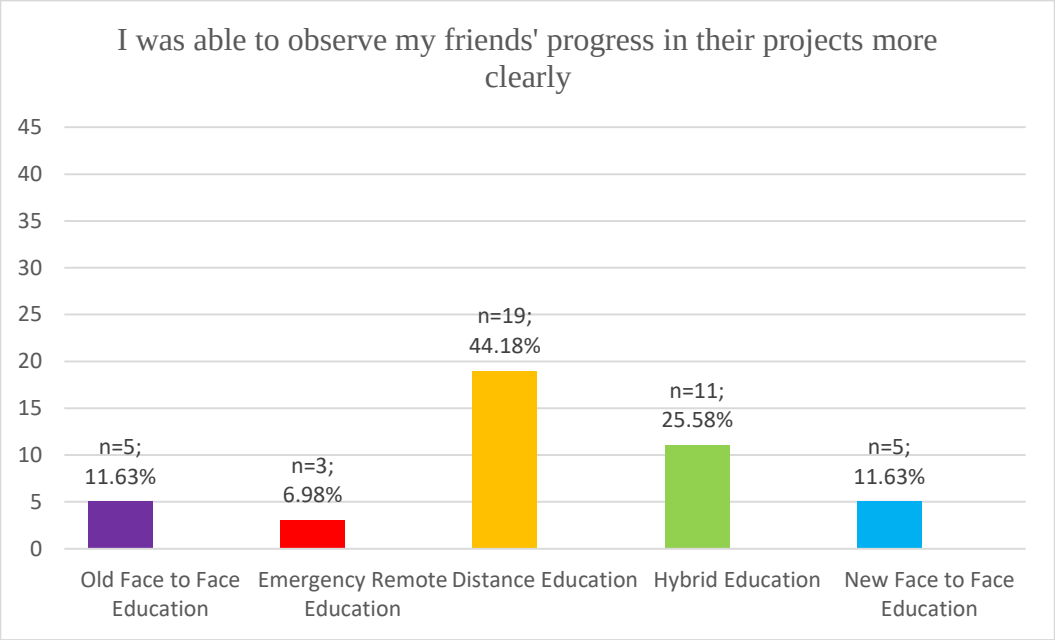


Figure 4.18: The relationship between interior architecture students' project follow-up and educational models of their peers

Similar to the previous statement, the statement "I was able to observe my friends' progress in their projects more clearly." was asked. The answers given to this statement are similar to the previous statement. According to the results of the survey; students who prefer distance education model (n=19) constitute the majority with a rate of 44.19%. Hybrid education (n=11) was their second choice. The old face-to-face education (n=5) and the new face-to-face education (n=5) options were equally preferred by few participants. The least preferred option was the Emergency Remote education model (n=3).

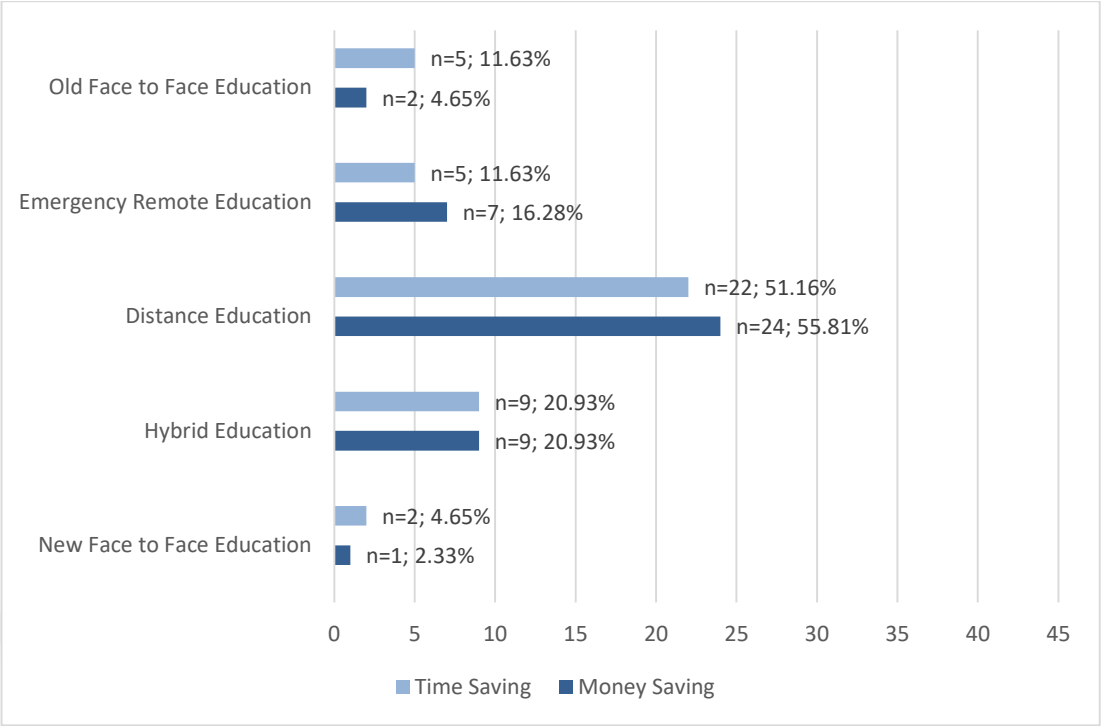


Figure 4.19: Analysis of the relationship between time and money savings and education models

The COVID-19 pandemic has brought some opportunities to save time in education. During the isolation period, digital equipment used for distance education (Distance, Emergency Remote and Hybrid education) allowed students to learn independently of time and space, eliminating the time spent traveling between campus and home. In this way, students had the opportunity to attend classes from home or wherever they wanted. In order to verify this idea, the students were asked which education model saved them more time and the statement "*I saved more time*" was presented. The answer given by the participants was in parallel with the above explanation. 51.16% of the participants preferred the Distance Education model (n=22). In second place, Hybrid Education (n=9) was marked by the participant, and the old face-to-face education (n=5) and Emergency Remote education model (n=5) options were equally preferred. The new face-to-face education model was selected by only (n=2) participants. According to the findings of this study, students saved the most time in the distance education model.

The participants were asked the statement "I saved more money" in order to analyze in which education model they spent less financially. According to the results of the research; it is observed that they made financial savings in the distance education

model with a high rate of 55.81%. In the hybrid education model, this rate was measured as 20.93%. Emergency remote education model was marked by (n=7) participants with a rate of 16.28%. The training models with the least financial savings were the old face-to-face (n=2) and new face-to-face training models (n=1). According to the findings of this study, interior architecture students saved the most money in the distance education model (n=24) during the pandemic period. Their transition to the distance education process eliminated the transportation expenses spent to go to the campus. It is also thought that as a result of the process, there is a tendency to reduce material and equipment purchases and they have greatly reduced stationery costs such as printing out blueprints through digital presentations.

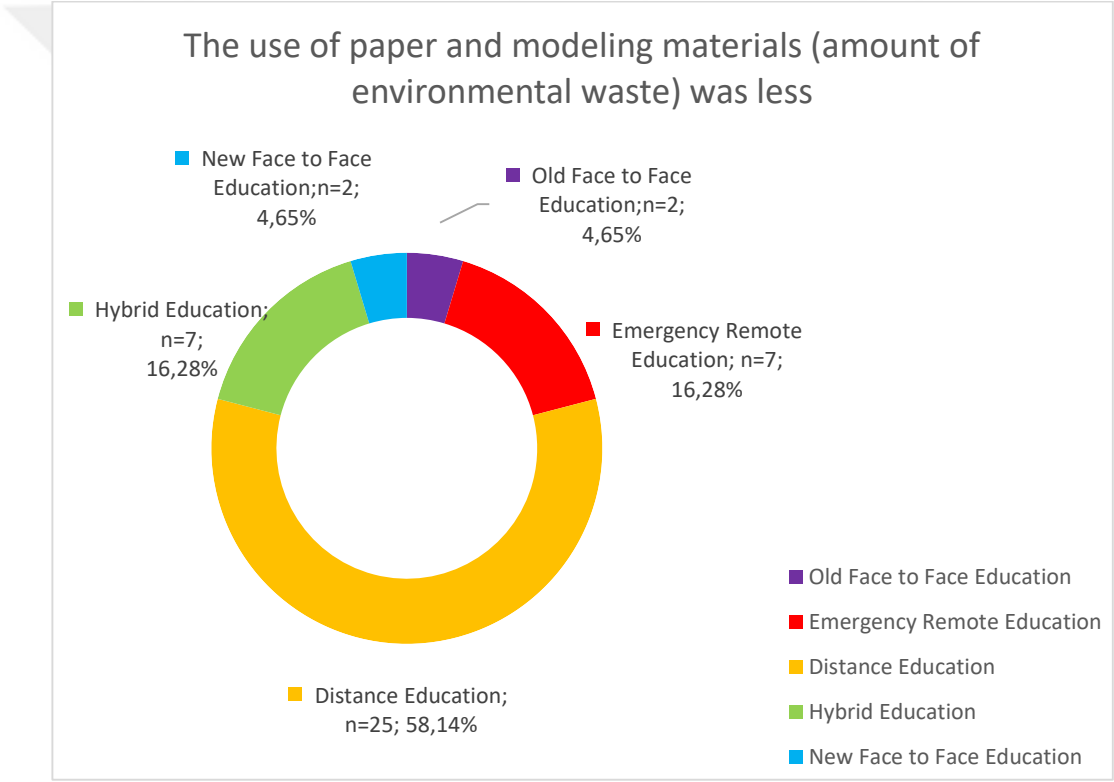


Figure 4.20: Analysis of paper and modeling material waste in different educational models

The participants were asked the statement "The use of paper and modeling materials (amount of environmental waste) was less." According to the results of this questionnaire statement; it was concluded that the amount of environmental waste was less in the distance education model with a rate of 58.14%. Hybrid and Emergency remote education (n=7) were equally preferred by the participants, and old face-to-face and new face-to-face education (n=2) were equally preferred. During the

pandemic period, interior architecture students have also gained awareness in terms of environmental sustainability. Especially in the distance education model (n=25), it was observed that the amount of environmental waste decreased significantly with the decrease in the use of paper and modeling materials. This situation is thought to contribute to the more efficient use of natural resources and to reduce their environmental impact by realizing the design processes of the students through digital platforms.

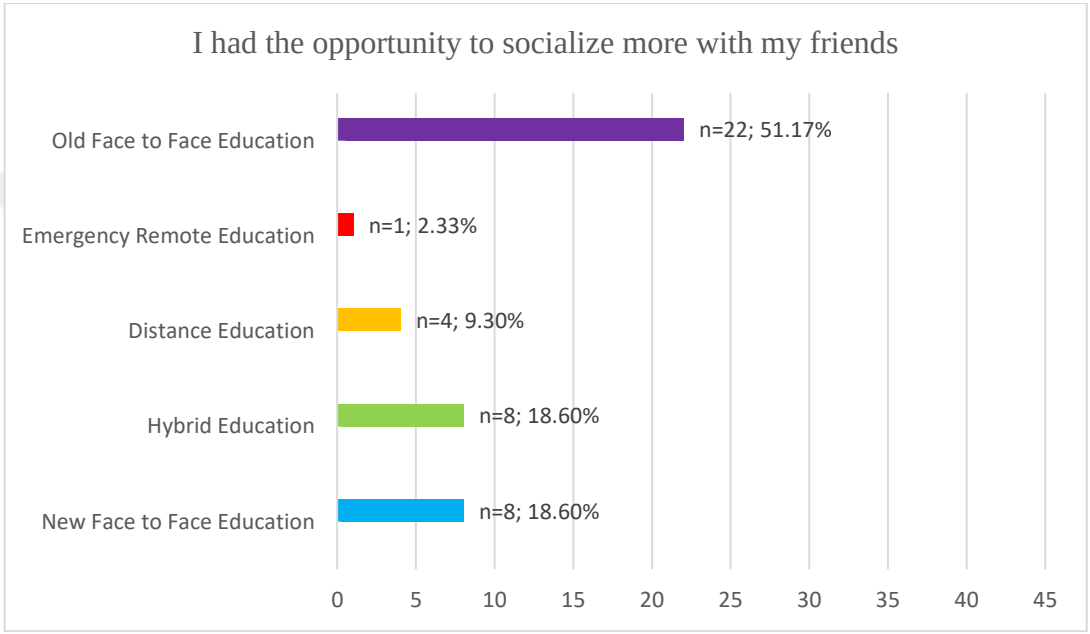


Figure 4.21: Relationship analysis between socialization and education models

Participants were asked about their perceptions of increased social interaction in different education models using the statement "I had the opportunity to socialize more with my friends". The findings revealed that the old face-to-face education option was preferred by a significant majority with a rate of 51.17 %. A total of (n=22) participants stated that they preferred this model. Hybrid education model (n=8) and new face-to-face education model (n=8) were equally preferred. On the other hand, distance education (n=4) and emergency remote education (n=1) were preferred by fewer participants. The COVID-19 pandemic has undoubtedly posed new challenges and changes in terms of social interaction for all university students. The implementation of social isolation measures has restricted face-to-face interactions and led students to turn to remote communication methods. While online platforms facilitated some activities, the lack of physical presence on campus prevented real

face-to-face interactions. Although the pandemic period required a different but difficult social interaction experience for interior architecture students, it can be said that technological developments provided opportunities for continued socialization. However, the survey results underline that technological communication alone may not be enough for students. The overwhelming preference for the old face-to-face education suggests that there is a significant desire among students to engage in physical social interactions. The lack of preference for new face-to-face or hybrid education models may be attributed to the fact that concerns about potential post-pandemic health risks may instill a sense of caution and reduce socializing tendencies.

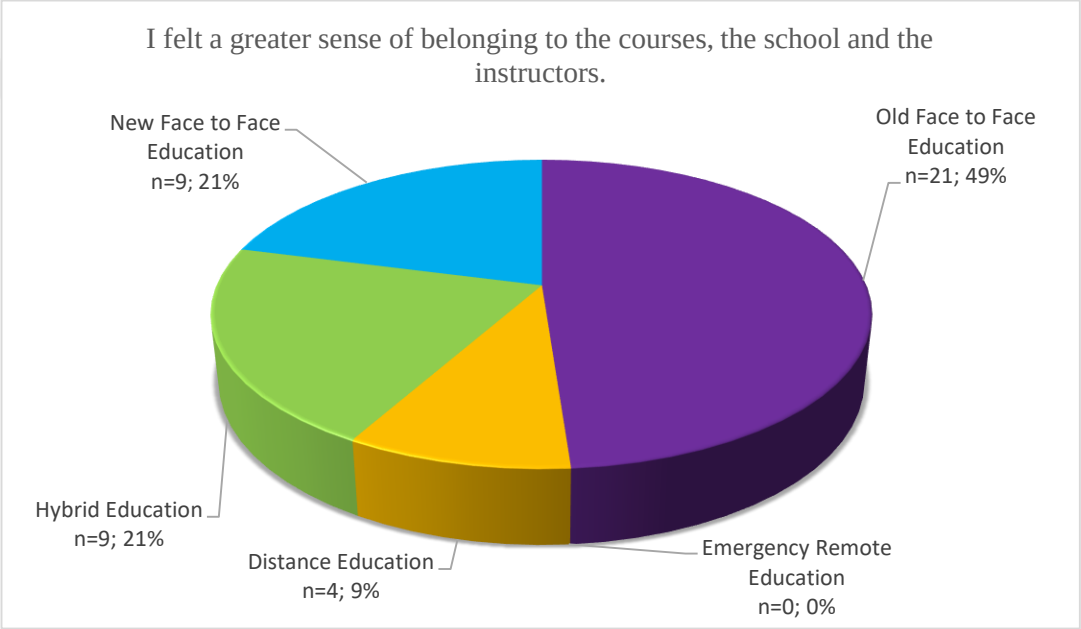


Figure 4.22: Analysis of the change of students' sense of belonging according to education models

University sense of belonging refers to students' sense of belonging to a university and is associated with academic, social and emotional engagement. In order to measure students' sense of belonging, the questionnaire "I felt a greater sense of belonging to the courses, the school and the instructors. " The most preferred option in the research results was the old face-to-face education with a rate of 48.84% and was preferred by (n=21) participants. The number of students who preferred hybrid education (n=9) and new face-to-face education models (n=9) is equal and has a rate of 20.93%. The distance education model was preferred by only (n=4) participants and the emergency remote education model was not preferred by any participant.

According to the survey results, it was observed that there were changes in the sense of university belonging of interior architecture students during the pandemic period. Social isolation measures have limited students' opportunities to be present and interact in the campus environment. It has been observed that the decrease in face-to-face classes and activities has reduced students' sense of belonging to the university. It is important for universities to focus on a variety of methods and supports to re-strengthen students' sense of belonging.

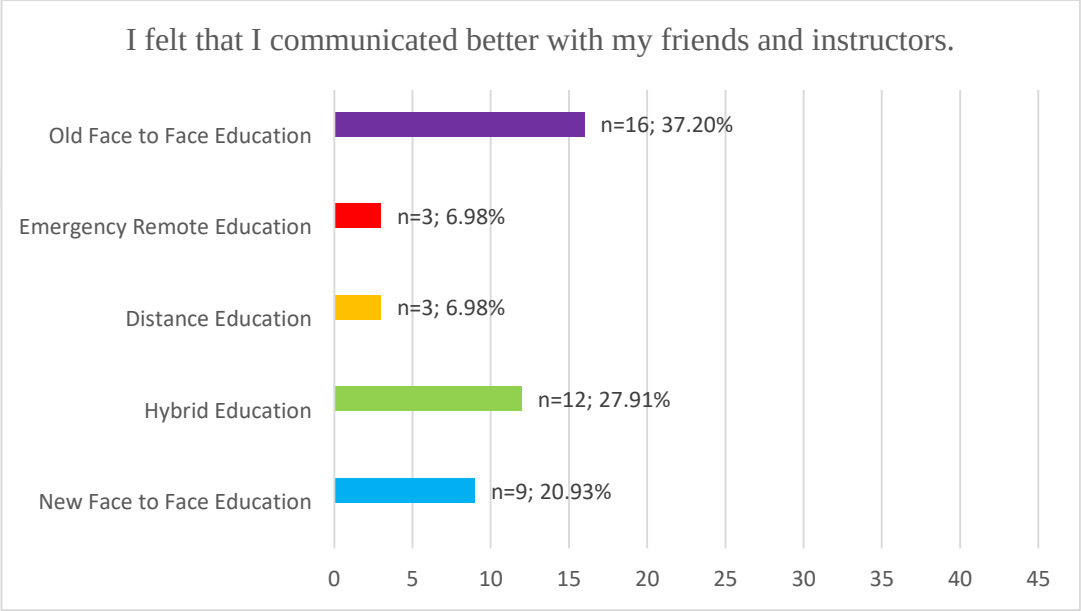


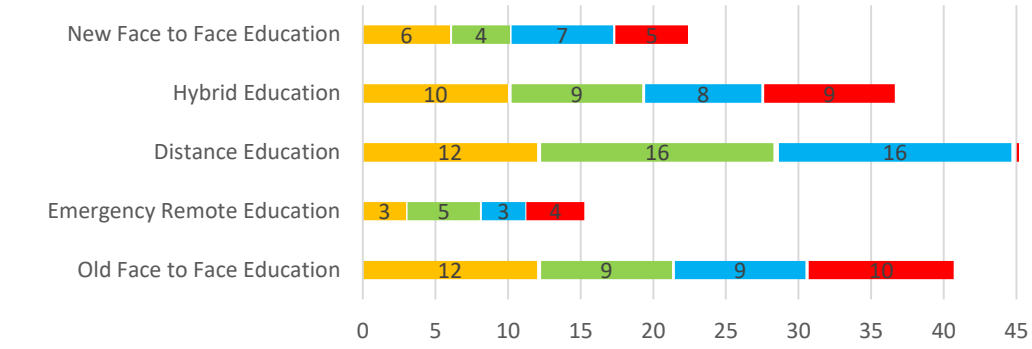
Figure 4.23: Social communication analysis according to education models

Instructor-student communication is extremely important at university. Good communication positively affects students' motivation, generates more interest in school and the course and contributes to their learning process. It also helps them solve problems and provides regular feedback. It increases student satisfaction and makes the learning experience positive. The participants were asked the statement "I felt that I communicated better with my friends and instructors." and it was tried to analyze in which education model they communicated better with individuals. According to the answers of the participants; it was determined that they communicated better in the old face-to-face education model. This option was preferred by (n=16) participants, with a rate of 37.20 %. This shows that students think that being physically present in the classroom and face-to-face interaction is more positive in terms of communication. The second preferred option is the hybrid education model with a rate of 27.91%. This

result shows that students both want to benefit from face-to-face interaction and see the advantages of accessing distance education in some cases. The new face-to-face education model was preferred by (n=9) participants. Emergency remote education (n=3) and distance education (n=3) were the least preferred education models in equal proportions. These results show that students think that distance communication is more challenging than face-to-face interaction and that the quality of communication may decrease. From all the answers received, it was found that students communicate better when they interact face-to-face.

On the basis of the data in the given table (Figure 4.24), it is explained how students evaluate different training methods and how they see their experience. The data includes the percentages of the students according to four criteria related to different training methods such as "Asking Easier Questions", "Providing Understandable Information", "Receiving Faster Feedback" and "Receiving More Explanatory and Appropriate Answers". The fact that students ask questions during the lecture without hesitation is a factor that positively affects and deepens their learning experience. The question-answer relationship between instructor and student encourages students' active participation in lessons, improves learning efficiency and enhances their understanding of concepts. Moreover, through questions, students have the opportunity to express their own thoughts, develop self-confidence and strengthen their ability to use critical thinking skills. To analyze this issue, the participants were asked the statement "I was able to ask questions to the instructors more easily during the course without hesitation." There is a numerical closeness between the participants' preferred education models. The new face-to-face model and the distance education model were equally preferred by the participants (n=12 for each). Hybrid education was preferred by (n=10) participants. Based on this data, it is concluded that students are comfortable asking questions to the instructors, whether in the virtual environment or in the physical classroom. The new face-to-face education model (n=6) and the emergency remote education model (n=3) were the least preferred education models.
Looking at the question from a general framework, it was observed that students were comfortable asking questions regardless of the distance or face-to-face education environment. This shows that students tend to improve their communication skills, increase their self-confidence and actively participate in learning. It is important for instructors to create an environment that encourages students to ask questions and to

consider every question as valuable. In this way, students' learning experience will become richer and more effective.



	Old Face to Face Education	Emergency Remote Education	Distance Education	Hybrid Education	New Face to Face Education
I was able to ask questions to the instructors more easily during the course without hesitation	12	3	12	10	6
(p) 1	27,91%	6,98%	27,91%	23,25%	13,95%
The instructors provided more understandable information about the course content, exams and assignments	9	5	16	9	4
(p)2	20,93%	11,63%	37,21%	20,93%	9,30%
I received faster feedback from the instructors	9	3	16	8	7
(p)3	20,93%	6,98%	37,21%	18,60%	16,28%
I was able to get more descriptive and adequate answers to my questions from the instructors	10	4	15	9	5
(p) 4	23,26%	9,30%	34,88%	20,93%	11,63%

Figure 4.24: Analysis of question-answer interactions between instructor and student according to educational models

Instructors' providing clearer information about course content, exams and assignments is one of the important factors affecting students' learning processes. Providing clear information during the lectures clarifies students' expectations about what is required of them and makes it easier for them to understand the content. In terms of exams and assignments, instructors should provide clear instructions, communicate expectations clearly, and share evaluation criteria. In this way, students can organize their study plans, find the resources they need and manage their time effectively. The participants were asked "The instructors provided more understandable information about the course content, exams and assignments." This

statement was used to analyze in which education model the instructors provided better information. The majority preferred the distance education model (n=16). The old face-to-face (n=9) and hybrid training (n=9) models were equally preferred by the participants. The emergency remote education model was preferred by (n=5) participants and the new face-to-face model was preferred by (n=4) participants. Based on these results, it was found that in the distance education model, the instructors provided more understandable information. It is recommended to investigate the information deficiencies of other education models, especially face-to-face education models. This analysis provides important guidance for instructors to improve their information processes and increase students' potential for better understanding and achievement.

Receiving feedback is a topic that is frequently discussed and emphasized in the academic literature. In order to receive effective feedback, it is important that both students and instructors use open communication channels. In particular, giving quick and clear answers to the questions directed to the instructors is of great importance for the comprehensibility and efficiency of the course. In this context, the participants were presented with the statement "I received faster feedback from the instructors". According to the findings, the majority of the students (n=16) stated that they received faster feedback in the distance education model. The numbers of participants who preferred the other three education models were close to each other. Old face-to-face education (n=9), hybrid education model (n=8) and new face-to-face education model (n=7) were preferred by the students. Emergency remote education (n=3) was the least preferred education model. It is recommended that research and improvement studies should be conducted on the reasons for the difficulties experienced in receiving feedback in face-to-face education models. Although there is a general perception that it is easier to receive feedback in the context of face-to-face communication, the survey results reveal a surprising preference for the distance education model.

The statement "I was able to get more descriptive and adequate answers to my questions from the instructors" was directed to the participants. It was observed that the answers to the questionnaire were close to each other. A survey was conducted to assess participants' perceptions regarding the clarity and adequacy of responses received from instructors. The responses obtained from the survey statement indicated a high degree of similarity. Among the participants (n=15), the distance learning model was preferred by 34.88% of them. The old face-to-face education model, on the other

hand, was chosen by 23.26% of participants (n=10). The hybrid education model received a preference rate of 20.93% from 9 participants (n=9). These results indicate a relatively balanced distribution of preferences among the three different education models. Consequently, regardless of the physical or virtual environment, it can be inferred that students receive explanatory and sufficient responses from their instructors. Lastly, the emergency remote education model, chosen by the fewest number of participants (n=4), accounted for a mere 9.30% of the total percentage.

When correlating the findings with the previous statement, it was observed that students receive feedback more promptly in the distance learning model, while the quality of responses provided was found to be better in both face-to-face and distance learning models. The new face-to-face education model was preferred by five participants (n=5). It is recommended to identify the shortcomings of the new face-to-face education model, specifically those aspects that were present in the old face-to-face model but seem to be lacking in the new one. Analyzing the factors that students found in the old face-to-face education but are missing in the new model is deemed necessary.

As a result, the Distance Education model stands out as the most successful method in terms of enabling students to ask questions more easily during the lectures, providing comprehensible information and receiving faster feedback.

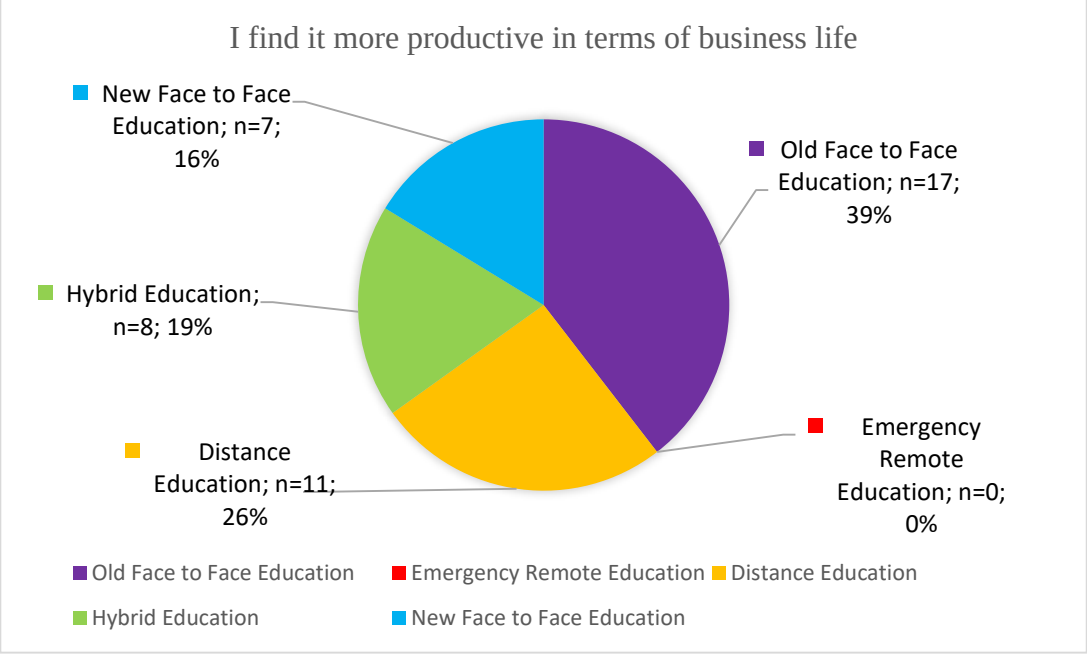


Figure 4.25: Future education preferences of interior architecture students and perception of productivity in business life

This study also included a future-oriented survey question covering 4th year interior architecture students, focusing on the group closest to graduation. Participants were asked the statement "I find it more productive in terms of business life." According to their answers, students generally expressed their preference for the education model that they found more productive in terms of business life. This statement was marked by 17 participants with a rate of 39.54% and this preference indicates the face-to-face education model. In second place is the distance education model preferred by (n=11) participants. Hybrid education (n=8) and new face-to-face education (n=7) were similarly preferred by the participants and the data show similar results. The emergency remote education model was not preferred by any of the participants. Based on this statement, it is concluded that the old face-to-face training model is the most efficient training model in terms of business life. An in-depth analysis should be conducted on why the face-to-face education model, which is found to be more productive in business life, is preferred and the reasons why students see the advantages and shortcomings in this model. In addition, why other education models are less preferred and what disadvantages they have in business life should also be investigated.

As the last question, the participants were asked an open-ended question to ask the students, who had experienced five different education models, their general thoughts about the applicability of these education models to the Interior Architecture department in the future. The question is as follows: "As students who have experienced all five education models, what are your general thoughts about the applicability of these education models to the Interior Architecture department in the future?" The answers to this question will reflect the personal opinions of the students. However, this open-ended question allows the participants to make a general assessment of which educational model might be more appropriate and effective in the Interior Architecture department based on their experiences. This type of question encourages participants to provide detailed and thoughtful responses, while providing researchers with different perspectives to guide the planning of future educational strategies and programs. The responses from the participants are analyzed in a table. The table is divided into three categories: Face-to-Face Education, Distance Education and Hybrid Education model.

Some of the participants mentioned that all education models should be applied to the Interior Architecture Department, so "All" option was added to the table. Also, some of the participants commented in general rather than choosing an education model and the option "Not Clear Answer" was added to the table because their preferred education model was unclear. Nevertheless, the table is generally based on three training models. Analyses are presented as numerical and percentage data. In addition, bar graphs and participant comments will be presented in the following sections of the study.

Table 4.9: Analysis of education models considered to be implemented in the department of interior architecture in the future: student perspective

Study Variables	Face-to-Face Education	Hybrid Education	Distance Education	All	Not Clear Answer
n	19	13	6	2	3
p	44.19%	30.23%	13.95%	%4.65	6.98%

Analysis of Education Models that should be implemented in the Department of Interior Architecture in the Future", the answers given by (n=43) participants were analyzed. According to these answers, the majority (n=19, 44.19%) find the face-to-face education model more appropriate in the Department of Interior Architecture. Hybrid education ranked second (n=13, 30.23%). In the third place, distance education (n=6, 13.95%) is preferred. Some participants (n=3, 6.98%) did not specify which education model they preferred.

These findings reveal the importance of diversifying education models in Çankaya University Department of Interior Architecture and applying different methods on a semester basis or depending on course types. Although face-to-face education is preferred by the majority of the participants, hybrid and distance education options should also be considered. In addition, the fact that the participants have different preferences and some of them want to see the advantages of all education models emphasizes the importance of diversity in the education process.

The analysis of the open-ended questions in the questionnaire shows that the majority prefer the face-to-face education model and emphasize the necessity of face-to-face interaction in interior architecture courses. Students desire more interaction, practical applications and direct instructor-student interaction in face-to-face

education. These findings suggest that face-to-face education plays an important role in the interior architecture learning process, encourages students' active participation and helps them gain experience.

S1, a participant, explained the reason for preferring face-to-face training as follows: ‘I think that applied courses should definitely be face-to-face. Our job also involves one-to-one meetings. However, I think this interaction has decreased with distance education. People should not just be an image on a screen.’

Interior architecture is a profession that requires persuasion skills in addition to technical knowledge. This profession includes effective communication skills as well as technical knowledge and skills. While studying interior architecture at universities, it is important that students are not only limited to learning technical courses, but also develop themselves to understand human psychology and gain more knowledge in the field of social communication. Practical work environments such as design studios and juries provide students with the opportunity to develop their technical skills and gain experience in public relations and future client relationships. Jury and project critical evaluations, which continue as an instructor-student relationship in the university environment, transform into a client-interior architect relationship after graduation. In this way, after graduation, interior architects become professionals who can interact with clients using their technical knowledge, present their projects in a persuasive way and be successful in terms of public relations. Success in this profession is based not only on technical competencies but also on human relations and communication skills.

Interior architecture education covers a profession where effective communication and interpersonal interaction are important as well as technical knowledge. In this context, it is seen that face-to-face education plays an indispensable role for interior architecture students. According to the answers given by the participants, students emphasize the importance of face-to-face interaction, practical applications and discussion environments in interior architecture education. Another participant, S2, also mentioned the issue of communication and expressed the necessity of face-to-face education as follows. ‘In short, our department is a department where we can make progress by taking face-to-face criticism, making small models when necessary, and discussing with our professors and friends. We could give criticism not only with the instructors but also with our own circle of friends, we could discuss the missing or correct sides and easily ask our instructor. I

think distance education should definitely and definitely not be applied in Çankaya University Department of Interior Architecture, especially in 3rd and 4th grades... "

Another participant, S3, expressed his opinion on the subject with the following sentences. ‘When we consider the increasing costs, digital presentations are easier than critical/jury times, while taking lectures and critiques face to face is always more efficient in the school environment. Although distance education seems more practical, I have always adopted the face-to-face education model in our departments and it was more efficient for me. As students who already spend a lot of time at the desk, both psychologically and physiologically, distance education is really inefficient. Maybe in the future, the sheet preparation/printing part can evolve from digital to presentation and preparation, and model making can be done through 3D modeling. I think this will add more to the students financially and increase their ability to use computer programs and prepare them more for their professional lives.’

The comment of participant S3 also emphasizes the importance of face-to-face interaction in interior architecture education. Considering the increasing costs, the participant acknowledges that digital presentations are easier during critique and jury times, but states that face-to-face lectures and critiques are more efficient in the school environment. This shows that students have the opportunity to interact with each other and the instructors to exchange ideas, receive feedback and enrich their learning experience. The participant states that interior architecture students largely need to work at a desk and therefore the distance education model is psychologically and physiologically inefficient. At this point, it should be noted that in the face-to-face education model, students have the opportunity to learn and practice more effectively in a stress-reducing environment. The direct feedback and communication opportunity provided by face-to-face interaction has an important role in developing students' interior architecture skills and reinforcing their collaboration skills. However, the participant states that in the future, practical activities such as preparing blueprints and making models can evolve to digital platforms and this can make a financial contribution to students. It should be stated that this transition will encourage students to gain more computer program skills and adapt to technological developments. This situation should be considered as an advantage that can better prepare interior architecture students for their professional lives. Based on the participant's comment, it should not be ignored that technological advances should also be taken into account in education and the use of digital tools for certain practical activities can provide

advantages to students. At this point, it can be said that face-to-face interaction and technology integration should be handled in a balanced way in interior architecture education.

Another participant, S4, defended the face-to-face education model with the following sentences. "I think face-to-face education is more productive and motivating. In addition, face-to-face lectures can be held and criticism can be given through presentations in classrooms to reduce the amount of environmental waste. My opinion is that hybrid education should never be done. I got the least efficiency from this training."

This participant's comment (S4) states that he thinks that face-to-face education is more efficient and motivating. He also suggests that critiques can be carried out in classrooms through presentations in order to reduce environmental impacts. The participant has a clear view that hybrid education should not be preferred and states that he gets the least efficiency from this type of education.

When think academically, it is important to emphasize the reasons why the participant prefers face-to-face education. It is thought that the fact that he thinks face-to-face interaction is more efficient is based on factors such as direct instructor-student interaction, face-to-face discussion and the opportunity to receive feedback. On the other hand, the participant's suggestion to give criticism through presentations in order to reduce the amount of environmental waste shows that sustainability and environmental awareness should also be considered in interior architecture education. Participant S5 said " I think distance education should not be implemented and students should be in contact with instructors and students. It has very challenging psychological aspects and face-to-face education should be implemented in order not to be asocial. If we look at the applicability, I think that the interior architecture department is the most difficult department of the architecture faculty and I definitely think that more applied and face-to-face courses should be applied for the future of students for their professions. As a working person, I realized that I had many deficiencies due to distance education. I would like to study and graduate with face-to-face education."

This student emphasizes that distance education should not be implemented and that students should be in contact with instructors and students. Stating that it is psychologically challenging, the participant states that it is important to implement face-to-face education in order not to be asocial. The participant, who thinks that the

interior architecture department is a difficult department, argues that students need more applied and face-to-face courses for their profession. He/ She states that as a working person, he/she realizes that he has deficiencies due to distance education and that he has difficulties due to this situation.

From an academic point of view, it is important to emphasize the reasons why the participant prefers face-to-face education. Factors such as communication, motivation and psychological needs emphasize the value of face-to-face education. In addition, the idea that students need to practice more in an application-oriented department such as interior architecture supports the importance of face-to-face education. The participant's personal experiences and his awareness of his shortcomings in working life reveal some of the difficulties of distance education.

Another participant, S6, stated the following about face-to-face education: " New face-to-face training and active use of zoom and 2D 3D modeling programs may be better for the student period. " comment was made. This comment emphasizes the importance of integrating technology into the education process. The participant thinks that the use of these programs can provide students with a better educational experience.

From an academic perspective, we can say that the participant focused on the positive effects of the use of technological tools on the educational process. Especially 2D-3D modeling programs can help students develop better understanding and application skills in a visual and design-oriented discipline such as interior architecture. At the same time, video conferencing tools such as Zoom can also be used effectively for communication and collaboration.

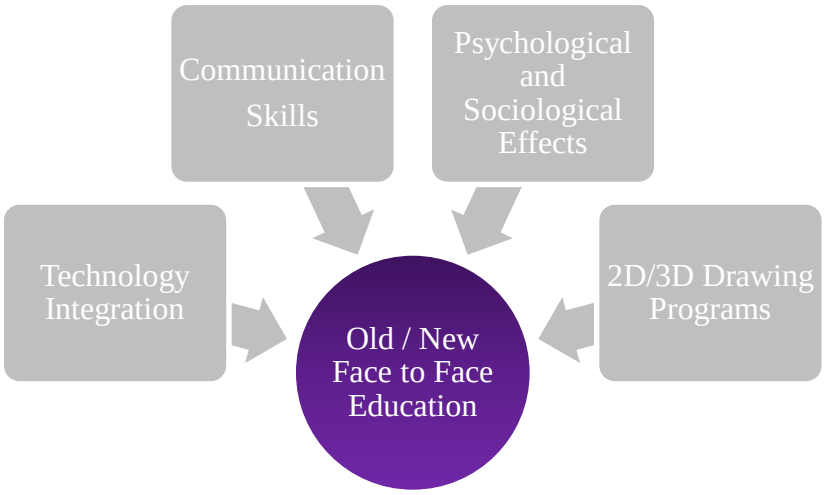


Figure 4.26: Schematic graphic of themes to be considered in face-to-face education from the students' perspective

In conclusion, these comments (S1 to S6) also emphasize the importance of face-to-face education. While the importance of face-to-face interaction in psychological and social terms is emphasized throughout the participant, other comments focus on the integration of technology into the educational process, the amount of environmental waste, and the active use of drawing programs for students to have a better experience.

When the comments of the students who prefer hybrid education are analyzed, it is seen that the participants distinguish between theoretical and practical courses. There were also comments about course grades. The participant comments are as follows: S7 "The distance education model was more effective in terms of seeing other students' projects in studio courses, so there were fewer unfair grades and everyone was familiar with everyone's projects. Lessons were understood more clearly, an important point that was missed in the classroom was not only not missed but also kept in mind because it was transferred to written language and shared more in distance education. However, it is also important for students to socialize socially if some classes are held face-to-face. I think that only studio courses should be in distance education." The participant emphasizes the distance education model and states that it is more effective in terms of seeing other students' projects in design studio courses. From an academic point of view, this comment reveals that students have the opportunity to exchange ideas by observing the projects and discover different aspects of the projects. It also contributes to reducing unfair grading and making the evaluation process more objective and fair. The fact that everyone is familiar with the projects of others argues for a more comprehensive learning experience. It is also stated that in the participatory distance education model, important points missed in the classroom are shared more through written resources and materials. This increases students' access to course materials, allowing them to fill in gaps and make up for missed information. The use of written materials provides students with the opportunity to analyze and understand the course content in more detail. In this way, a clearer understanding of the lessons and deeper learning can be achieved. The participant expressed his support for hybrid education under the theme of individual interaction, stating that it is important for students to socialize socially by having some classes face-to-face. Face-to-face interactions help students develop the skills of working together, discussion and collaboration. When students and instructors come together in the classroom to exchange ideas, it helps students develop their critical thinking

skills and creativity. In face-to-face classes with social interactions, students have the opportunity to learn from each other and work together, which makes learning richer and more effective.

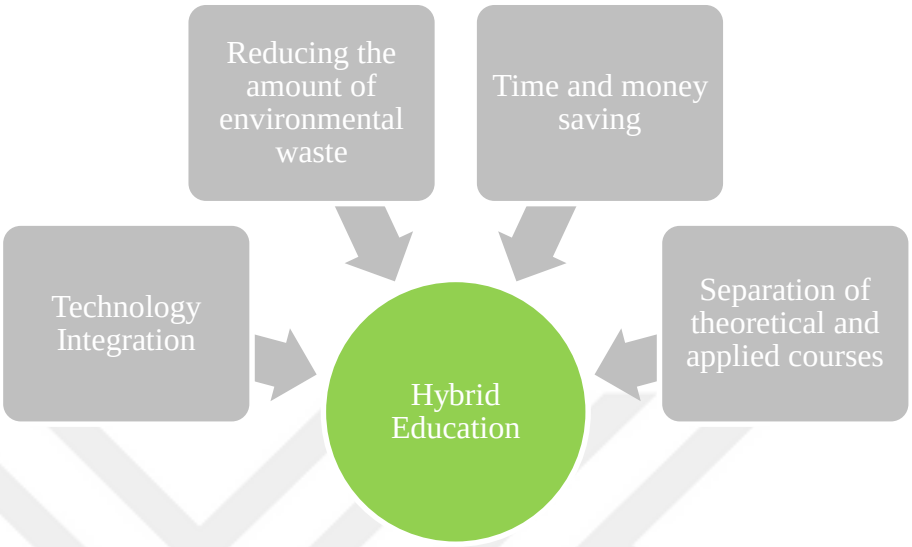


Figure 4.27: Schematic graphic of themes to be considered in hybrid education from the students' perspective

S8 conveys his perspective on the issue in terms of time and financial savings. The comment made by the student named S8 "I think it is more beneficial in terms of education to have theoretical courses at a distance. At the same time, it is also nice to save time and money. As interior architecture students, we are always racing against time. In fact, this is in the general architecture faculty and everyone is experiencing it. So if this problem is in the face-to-face part, it can be hybrid or remote, preferably the advantage of this is very useful in terms of time. The disadvantage is that if we do not understand the critique given in applied courses, we think about what we can do about it until the morning, sometimes we cannot do it that week and we even have absenteeism. But in general, as someone who has experienced them all, distance education is more suitable for me". This comment expresses the benefits and some disadvantages of distance education in terms of education. Among the advantages mentioned in the comment, it is emphasized that distance education is time and cost saving. It is stated that interior architecture students face time pressure and this problem is also common in the general architecture faculty. Distance education provides an advantage in terms of time by allowing students to attend classes in a more flexible way. However, the disadvantages mentioned in the comment were also

mentioned. In applied courses, students experience a lack of support, especially in the case of not understanding the critiques. Sometimes this situation is difficult for the students and in some cases even leads to problems such as absenteeism and non-attendance. In general, the author of the comment states that the distance education model in the theoretical courses and the face-to-face education model in the practical courses were more efficient for him, in short, he chose a hybrid education model.

Student S9 commented, "When both face-to-face and online education were done together, I received a much better education in terms of both development and learning". Participant S10 commented, "I think a hybrid division such as 60% distance education and 40% face-to-face education would be the most efficient process integration. Participants did not distinguish between theoretical or practical lessons.

Student S11 said "I think that the theoretical courses should definitely be conducted remotely and the practical courses should be conducted face-to-face and remotely (hybrid)." and showed a parallel approach to the previous participants.

Student S12 emphasized the environmental benefits of using technology in education and the applications that positively affect students' health. The user comments; "using developing technology in education (in difficult departments such as architecture) is a practice that benefits students. The digitalization of educational materials also reduces paper waste and contributes to protecting the environment, so I think it should become more widespread. In addition, I think that having all the tasks assigned to the students by the instructors during the school hours and not taking homework home has an important role in terms of both mental and physical health". In this comment, he emphasizes the importance of integrating technology into education and that it will benefit students in difficult departments such as architecture. It is also stated that the use of digitized educational materials contributes to environmental protection by reducing paper waste. This is a factor suggesting that sustainability and environmental awareness should be widespread in education. In addition, it is stated that it is important for both mental and physical health that students complete all tasks during school hours. It is emphasized that by reducing the obligation to do homework at home, students can get more rest time and maintain a healthy balance. This can reduce students' stress levels and allow them to focus on the learning process and be more productive.

As a result, the comments made by the participants emphasize the necessity of different education models in theoretical and practical courses. It is revealed that

theoretical courses are more understandable and easier to follow with the distance education model, while face-to-face interaction is emphasized in design studio courses. One participant suggested the opposite model and stated that design studio courses should be conducted remotely. This shows that students have different perspectives on the subject. Students draw attention to issues such as paper waste in distance education methods and state that drawings and presentations made in digital environment contribute to the environment. In addition, the hybrid education model saves time and cost. It was found that stationery costs were significantly reduced in digitally presented project designs, and that hybrid education reduced travel and food expenses, which resulted in financial savings. It can be considered more efficient for students if the time spent on traveling to the campus is transferred to the lessons. Students also emphasized the importance of integrating technology with education.

As for the responses to the distance education model, the participant named S13 said, "I think that the education in the digital environment was the most productive period in terms of education, even though it was bad in terms of socialization. Easiness such as understanding, explaining, asking questions was more possible. Although the participant stated that the education in the digital environment was bad in terms of socialization in general, he stated that he had a productive educational experience in terms of communication between the instructor and the student.

Participant S14 said, "I think that communication between students and research assistants was easier and faster during the training period. This was very useful for fast feedback and focus. I think it would be useful to have distance education in some courses in the future. The thoughts expressed in this sentence show that students pay attention to the importance of communication and feedback processes in the education process. By stating that communication is easier and faster, it is emphasized that the efficiency of the interaction between the student and the instructor increases. In addition, it was stated that it was useful to provide fast feedback and focus. In addition, the idea that distance education could be useful in some courses was also expressed. This statement emphasizes the advantages of using distance education in certain situations.

Participant S15, on the other hand, although he did not exactly define a distance education model, expressed himself in the following sentences; "I believe that computers and other digital media will contribute more to education because in the future, life will speed up even more and the need for technology will increase even

more for everything to be even faster. This comment highlights the importance of digitalization and integration of technology into education. It gives rise to the idea that the new generation wants to benefit from the opportunities of technology.

Participant S16 said; "In the face-to-face education system, while we gathered around the table to see and listen to the criticism of our friends and everyone did not have the opportunity to see and listen equally, our lesson was less efficient than the online system, while in the online system, everyone could listen and see the same criticism from their own screens, observe the same mistakes in themselves more easily and improve their project even through the criticism of their friends. Apart from that, the worst part of distance education, in my opinion, was that when you turned off the camera for systematic camera problems or short-term needs, you were written absent in some lessons. While it can be seen from the development in the projects whether the person listens to the lesson or not, it is wrong to be graded and evaluated in this way. (I wish we had the opportunity to listen off camera in online education while we could not attend face-to-face education when we got sick in this process.)". The thoughts expressed in this sentence show that students focus on the differences and advantages between face-to-face and distance education. It was stated that students did not have the opportunity to see and listen equally in face-to-face education when they gathered at the table and this situation decreased the efficiency of the lesson. On the other hand, it was stated that in distance education, everyone can listen to and see the same critique on their own screen and in this way, they can observe mistakes and make improvements more easily. In addition, as one of the disadvantages of distance education, it was criticized that in some courses with camera problems or when the camera is turned off for short-term needs, it is written as absent. In this case, it was stated that it was wrong to evaluate whether a person listened to the lesson or not through project performance. For example, while there is a problem of not being able to participate in face-to-face education in case of illness, the opportunity to listen to the lecture even when the camera is turned off in distance education was evaluated.

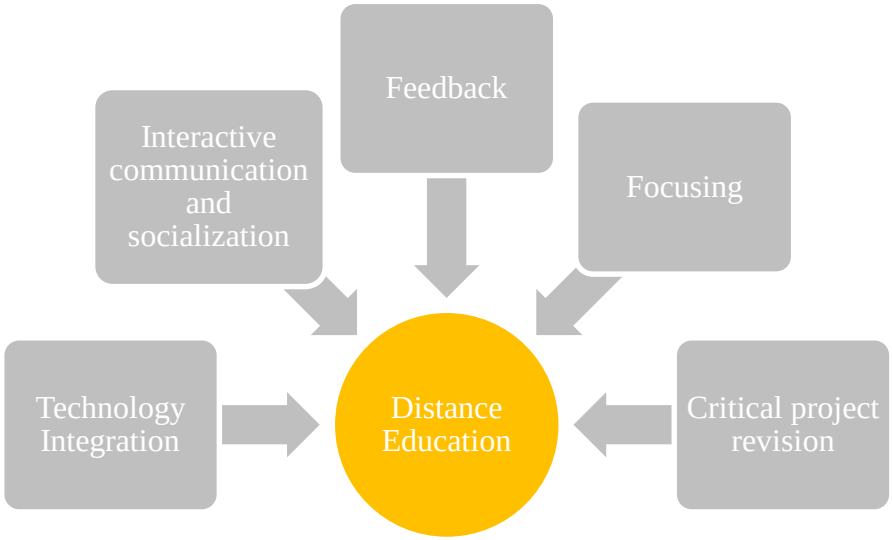


Figure 4.28: Schematic graphic of themes to be considered in distance education from the students' perspective

When the results related to distance education are examined, it is seen that the participants made comments on the themes such as the integration of technology into education, focusing on the lesson, getting quick feedback, interactive interviews and the difference of socialization in the campus environment and following the criticisms of their peers.

Participant S17 emphasized that all education models have different features and advantages without indicating any preference. This idea was expressed as follows: "In each of the five different education models, I had an idea about how to understand myself more easily and be more successful. The contributions of distance education were saving time and money and the fact that each project was clear and visible to everyone. Hybrid education was similar in terms of business life in that it was both computerized and face-to-face. At the same time, when we switched to face-to-face training, we had the opportunity to spend more time with our friends and instructors. In this context, they all had pluses for me." The thoughts expressed in this sentence seem to be in line with the student's reflection on the personal experiences and advantages of different training models. The participant stated how five different education models provided ideas on how to understand more easily and achieve success. She stated that she rediscovered herself in each education model. Distance learning saves time and money and projects are clearer and better visible to everyone. Hybrid education is similar to the combination of computerized and face-to-face education in business life. By switching to face-to-face training, more time can be

spent with friends and instructors. In this way, it was emphasized that each training model has advantages for the participant.

S18, again without specifying a training model preference; "All training models have pros and cons. But neither professors nor students should forget that the most important thing in interior architecture is time. I think action should be taken accordingly." The participant emphasized that each model has advantages and disadvantages, but the time factor should be considered.

Participant S19 underlined the necessity of technology without preferring any model. "As long as we have an education staff that is aware of technology and new developments, I think different education models will positively affect the process." The participant mentioned that the instructors should have a good technological equipment.

CHAPTER V

CONCLUSION

The COVID-19 pandemic has caused significant changes in the field of education as well as in many sectors. Global factors such as the changing world order and global warming make the emergence of new pandemics possible. For this reason, it is of great importance that education, which should never be disrupted and should maintain its continuity by adapting to current conditions, can continue efficiently.

This thesis aims to examine the changes in interior architecture education before, during and after the COVID-19 pandemic. It also aims to evaluate in detail the advantages and disadvantages of five different education models experienced during the pandemic period. At the same time, it is aimed to determine the students' perspectives on these changing education models, to analyze the effects of the change in course operation, duration and materials used in the course on interior architecture education in the context of design studios. In order to achieve these objectives; qualitative and quantitative research methods were used. Through the research process that started with literature review and Çankaya University curriculum archive research, the themes to be analyzed related to education were determined. Since the thesis was limited to design studios; phenomenological and mixed questionnaires were applied to students taking INAR 402 – Interior Design Studio-VI course. Within the scope of the survey, issues such as the use of technology, course satisfaction, course teaching methods and the problems they experienced during the pandemic period were examined in the context of five different education models. The main hypothesis of the study was formulated as "Due to the COVID-19 pandemic, changes have occurred in Çankaya University Department of Interior Architecture education as well as worldwide." This hypothesis was determined to predict the effects of the pandemic on interior architecture education.

In order to understand the nature of the changes caused by the pandemic in interior architecture education, especially how design studio education has transformed, and the needs that will arise in interior architecture education after the pandemic, the three questions mentioned in Section 2.1 were tried to be answered within the scope of the thesis.

The questionnaire study, which constitutes the findings of the thesis, was applied to Çankaya University Department of Interior Architecture 4th grade students taking the 'INAR 402- Interior Design Studio VI' course in 2022. A total of 43 people, 27 female and 16 male students, participated in the research (Table 4.1.). When the research findings were examined, it was observed that the most common preference of Çankaya University Interior Architecture students, who faced distance education processes during the COVID-19 pandemic period, was the use of laptops while attending classes (Table 4.4.). The portability of laptops provided students with the flexibility to work and learn in different locations. The survey findings show that the majority of the participants think that the working environment at home is suitable for distance education (Figure 4.4.). The opportunity to continue their education outside the home in libraries, cafes or other suitable environments has supported students to continue their education processes efficiently. However, internet connection problems negatively affected this positive participation in some cases (Table 4.5. and Figure 4.1.). When students encountered technical problems, such as internet connection breakdowns or slowdowns, they risked not being able to attend classes on time, not being able to provide quality communication, or not receiving the content in full. The research shows that students also experienced hardware problems, Zoom connection and sound quality problems (Table 4.5.). Such problems negatively affected students' active participation and motivation (Figure 4.12.). These findings emphasize the importance of measures to be taken in planning and implementing the distance education process. Educational institutions and governments should take the necessary steps to provide students with appropriate internet infrastructure and technical support. Since internet connectivity problems in the distance education process can have negative effects on the quality of education and success of students, it is important to approach this issue with care.

It was found that the students would review the relevant materials for reviewing the course when they were uploaded to the Çankaya Webonline system by the instructors of the course. This shows that they are open to trying different methods

from traditional in-school learning processes and that they are open to personal learning (Table 4.6.). The applications most frequently used by the participants for communication purposes were also analyzed. In the survey question where Çankaya Webonline, e-mail, WhatsApp and Zoom options were given; it is seen that the use of communication applications has also differentiated with the changing education models. In the old face-to-face education model, it was found that they mostly used Çankaya Webonline application to access course materials (Figure 4.9.). They stated that this application has a simple interface and provides the advantage of easy use (Figure 4.8.). In the emergency remote education model, it was observed that students used many applications together. Since this period is a transition period between face-to-face and distance education models, it shows that communication is made through many channels. The distance education model stands out as the education model in which communication applications are used the most and there is a balanced distribution in the answers given by the participants. They stated that they use Zoom program the most in this education model. WhatsApp and Çankaya Webonline applications are in second place in terms of usage. In the distance education model, it is thought that the sharing of course materials and information, as well as Zoom meeting login links and passwords in the Çankaya Webonline system is a major factor in the frequency of application use. The use of WhatsApp was used to ensure communication between student-instructor and student-student regarding the course. Students communicated via WhatsApp application to report Zoom connection problems or that they could not participate in the course. In addition, WhatsApp conversation groups were created for each course. It is seen that Çankaya Webonline and Zoom applications are used more in the hybrid education model for similar reasons. In the new face-to-face education model; it was seen that Çankaya Webonline was used the most. When these data were analyzed, it was found that Çankaya Webonline application is actively used in every education model, Zoom application has a great place in education and is used extensively in distance education processes (Figure 4.9.).

It was also analyzed which education model they preferred in applied and theoretical courses. It was found that the participants mostly preferred the old face-to-face education model in applied courses and the distance education model in theoretical courses (Figure 4.10.). This is again an indication that they attach importance to face-to-face communication in courses that require practice. Since

theoretical courses are generally lectures and continue through certain presentations, it was concluded that they are also understandable and efficient in distance education. A study was also conducted on students' attendance rates and course durations. It was found that while in the old face-to-face education model they found it efficient to have long lessons, in the distance education model they participated more in the lessons (Figure 4.11.). Factors such as students' moods not being suitable for going to school and distance from the campus affect class attendance. These findings suggest that the distance education model can positively affect students' participation in educational processes and that flexibility of location is an important factor in this regard. In cases where students cannot attend face-to-face education for various reasons, it is seen that the distance education model helps them to continue their education and increase their participation.

As stated in the purpose and scope section of the study, the study focused on the Interior Design Studio courses. It was determined that critiques for the development of 2D and 3D design projects played an important role in the execution of these studio courses (Table 4.7.). It was determined that students prefer these critiques as one-on-one or discussion critiques with students and instructors and that they would like to receive this process digitally (Figure 4.2.). It was observed that this process was more efficient under the distance education model (Figure 4.3.). However, the research also made it clear that students also value face-to-face interaction. It was also found that the distance education model is the education model in which they feel comfortable and critical (Figure 4.17.).

Physically visiting the project space to be designed in the design studios was an important finding in both the phenomenological and mixed survey. In addition, it was concluded that increasing the detailed introduction of the materials used in interior design in terms of their properties, structure and application would positively affect the education process. In this context, it was observed that students preferred the hybrid education model. In other words, it is thought that while they value face-to-face interaction in terms of social communication with people who are experts in their field and have more knowledge and experience, such as taking criticism, walking around the project area, and material presentation, they tend to turn to technology in other educational methods (Table 4.7.). These findings provide important clues that interior design studios should be adapted to the distance education model and a hybrid education approach should be adopted to meet the expectations of students. Students'

desire for digital tools should be taken into consideration, but it should not be forgotten that face-to-face interaction and field experiences are also indispensable. Therefore, when creating an effective educational model for interior design education, a balanced approach should be adopted to enable both technological opportunities and face-to-face interaction. Participants stated that the integration of technology into education contributes to productivity (Figure 4.5.). The research also evaluated 2D drawing programs and 3D modeling programs used in project design. According to the findings, it was concluded that students perceive the space better when they use 3D modeling programs, 2D and 3D programs are useful in interior architecture education and facilitate critical processes (Figure 4.6.). Thanks to these programs, it is thought that students improve their 3D thinking skills and construct the space better. Participants stated that their 2D and 3D drawing skills improved more in the distance education model (Figure 4.7.). This situation shows that in the distance education model, students feel more comfortable in an environment where they feel more comfortable and less distracted, and that their program skills will improve by providing the necessary focus, and that they allocate more time. Participants also stated that the design planning and project progression processes are faster and easier in the distance education model (Figure 4.13.). The hybrid education model seems to be the second preferred option. According to the statements of the students in the questionnaire; the success rates in juries and courses are in line with this approach. While the participants stated that they were most successful in juries in the old face-to-face education model, they stated that their general success increased in distance education and hybrid education models. The hybrid and distance education models preferred in juries have a very close preference rate (Figure 4.15). It was also investigated whether the participants followed the projects of their peers and revised the mistakes in their own projects. It was found that they followed their peers' projects mostly in the distance education model (Figure 4.18.). Within the scope of the research, motivation and focus were also examined. It was found that students were most focused in the old face-to-face education model. With a very close ratio to this result, it is seen that they do not have a focusing problem in the distance education model. The education model in which they felt most motivated was found to be the old face-to-face education. According to the results of the research, it was determined that the motivation rates of the students decreased as the education models changed. It was found that the problem of motivation and focusing was most common in the Emergency Remote Education model (Figure 4.12.).

The education models in which they understood the course subjects most efficiently were the old face-to-face and distance education models (Figure 4.16.). In short, it was found that they clearly understood the subject in the education model in which they provided motivation and focus, and the data confirmed each other. The study also examined the health problems experienced by the students in the distance education model. It was found that the majority of the participants had complaints of low back pain and eye fatigue. This finding supports the negative effects of spending too much time sedentary at the computer (Table 4.8.).

Dedicated work and research are of great importance when designing. It was found that the participants mostly conducted research in the distance education model. This situation suggests that they transferred the time spent during transportation to the campus to the lesson (Figure 4.14.). In the continuation of the questionnaire, students were also asked about saving time, and it was stated that they saved the most time and money in the distance education model (Figure 4.19.). These two data on time support each other. The education model in which the participants generated the least environmental waste was distance education (Figure 4.20.). In design studios, the required paper layout printouts and model making not only increase stationery costs, but also cause a lot of environmental waste. It is thought that this approach should change in terms of a sustainable environment.

The social communication provided in classrooms and social areas on the university campus has many effects such as coming to school with pleasure, being successful in classes, and creating a sense of belonging to school and friends (Figure 4.22.). Socialization is important for all individuals to ensure a quality life and healthy communication (Figure 4.21.). When asked about the education model in which the participants socialize the most with their friends and provide quality communication with individuals, the findings show that it is the old face-to-face education model (Figure 4.21., Figure 4.22., and Figure 4.23.). Communication between students and instructors was also examined within the scope of the research. It was found that students could ask questions to instructors without hesitation in the old face-to-face education model and distance education models (Figure 4.24.). In addition, it was found that they received explanatory and adequate answers from the instructors in these education models, and it was determined that both findings supported each other. Distance education was the education model in which students received the most understandable information about course content, exams and assignments and received

faster feedback (Figure 4.24.). The education model that students found most suitable for professional life and that should be implemented in the future was the old face-to-face education (Figure 4.25. and Table 4.9.).

As a result, the findings support the research hypothesis. The COVID-19 pandemic has changed the duration of interior design studio courses, the applications used to access the course, and the way the courses are taught. It is clear that students have adapted to the distance education model. However, it should not be ignored that they prefer face-to-face education in many aspects. In short, according to the findings obtained from the participants, interior architecture education can be improved by designing a new hybrid education model.

When the students' responses to both the data they provided in the mixed questionnaire and the open-ended questions were analyzed comprehensively, it was concluded that some themes should be paid attention to in educational models. The analysis includes face-to-face education, distance education and hybrid education models. A summary of the main findings and themes emphasized by the participants is given below:

Face-to-face education model; many participants emphasized the importance of face-to-face education, especially for interior architecture, due to the nature of the profession that requires interpersonal communication skills. Face-to-face education is considered necessary for practical applications, direct instructor-student interaction, and the development of persuasiveness and the ability to express oneself clearly. In addition to traditional education methods, students also emphasize that technological opportunities should be utilized more in this education model. The use of digital presentation methods instead of paper printouts, and the use of 2D and 3D drawing programs instead of hand drawing or sketching were seen as elements that would support education. They stated that this approach would save both money and time. Some of the participants stated that they found face-to-face education efficient and motivating. They argue that face-to-face education contributes to the psychological well-being of students and helps them develop the social skills of campus life (Figure 4.23.). Throughout the survey, it was observed that the respondents found the old face-to-face education model more suitable. Identifying the shortcomings of the new face-to-face education model and determining whether students have adaptation problems is important for educational efficiency.

When examining the Hybrid and Distance Education model (Figure 4.27. and Figure 4.28.), some participants stated that hybrid education combining face-to-face and distance learning can provide advantages such as flexibility and better access to course materials. While distance and hybrid education can have benefits such as saving time and money (Figure 4.19.) and reducing environmental waste (Figure 4.20.), they also noted that it can lack the social and interactive aspects of face-to-face learning (Figure 4.21.). Participants also emphasized the positive effects of integrating technology into education, especially for design-oriented fields such as interior architecture, in this educational model. Digital tools such as 2D/3D architectural drawing programs and video conferencing tools are mentioned throughout the survey as enhancing learning experiences and communication between students and instructors. In addition, some of the respondents suggested that theoretical courses can be conducted effectively through distance education, while practical courses such as design studios should be conducted face-to-face (Figure 4.10.). Distance learning was also cited as having the potential to provide faster feedback and allow critiques to be easily shared in an understandable way. However, some participants also expressed concerns about the efficiency of critiques received in distance learning compared to face-to-face discussions (Figure 4.3.). Students reported that they were unable to socialize in the distance learning model, which had negative psychological effects (Figure 4.21.). This data shows that personal preferences for each educational model are different based on learning styles, communication preferences and experiences.

The COVID-19 pandemic has brought technological developments such as the transition to virtual platforms and the effective use of digital resources. The replacement of traditional methods with technological tools has changed the education life of interior architecture. Giving digital critiques instead of the blueprint printouts used in design studios, introducing projects with 3D modeling and animation instead of model making, giving critiques of 2D technical drawings not on the blueprint but with the help of a pointer or using the Annotate command in Zoom, sharing previously photocopied lecture notes in digital environment, organizing meetings through the Zoom program in cases where it is not necessary to go to the campus are evidence that design studios have changed. It is clear that instructors need to adapt more to technology. In the future, a hybrid education paradigm that combines the benefits of face-to-face and distance education in theoretical and practical courses is foreseen. With the developing technology, it is thought that VR glasses will become widespread

in the age of artificial intelligence and digital applications and visual media tools will be used more frequently in presentations and animations. The availability of complete technical infrastructure and digital platforms is of great importance in order to ensure smooth and high quality education processes, to create a safe and convenient learning environment, and to be prepared for new pandemics.

In conclusion; in a period when synchronous and asynchronous learning approaches are intertwined, the interactive learning experience in face-to-face education supports both academic and social development of students. While the students stated the value of face-to-face interaction in terms of psychological satisfaction and social skill development, it was found that the asynchronous learning approach enriches the educational process by offering time and space flexibility in distance and hybrid education models. It is thought that a better quality education will be provided when technology integration is provided to education at the necessary points by paying attention to these factors.

5.1. BENEFITS AND FUTURE IMPORTANCE OF VIRTUAL TECHNOLOGIES

Technological applications are employed in the interior design and spatial representation (presentation) process, as they are in many other areas of design. Virtual reality is a computer-generated artificial intelligence product that provides interaction and collaboration between users of this technology and blends information tools with the real environment (Schwienhorst 2002). Augmented Reality (AR), which allows adding virtual objects on top of the physical environment simultaneously (Alkhamisi and Monowar 2013: 26), is among the technological innovations that attract attention in the 21st century. AR technology displays a hybrid approach that is both real and virtual (Panetta 2017). Since 2005, it has been reported as an emerging and promising technology by Gartner AR, a technology consulting firm that provides forecasts regarding the future of new technical trends (Kılıç 2018: 171).

In interior architecture education, it is very important to use 2D architectural projects and 3D visualizations with traditional methods effectively and efficiently in terms of time and materials. Computer-aided design programs utilized in today's design processes are always evolving in terms of enriching processes and giving ease to users. Because digital media-supported design applications are an important part of many fields of study, including interior architecture, architecture and product design,

it provides users with 2D and 3D modeling and visualization tools, as well as virtual (VR), augmented (AR), mixed (MR) and extended reality (XR) applications. It is possible to talk about the use of AR technologies as an effective and beneficial method in the process of interior architecture education. It is expected that AR will contribute to learning for the benefit of students and instructors in institutions that provide space design education with the flexible and easily adaptable system features. (Arabacıoğlu and Gülel 2019: 169) emphasized that the use of virtual technologies in interior architecture studios offers significant benefits in "interdisciplinary collaboration, access to information, field trip, and design process and presentation techniques". Since design studios are within the scope of an applied course and learning by doing experience is realized, quality communication between individuals is of great importance. In this context, design studios using Augmented Reality (AR) technology facilitate interpersonal communication by supporting students' interdisciplinary interactions and group work. By working together through digital glasses, students can collaborate and interact on virtual objects. This contributes to the development of group work skills and the exchange of ideas (Arabacıoğlu and Gülel 2019: 164)

In design studios, understanding the project spaces correctly is of great importance for a successful design process. Unlike 3D modeling software used in virtual reality, AR applications offer the opportunity to represent products in real spaces. In this way, interior architecture students can carry out field trips and field studies more efficiently and interactively (Gülel 2018: 72). Through tablets or smartphones, students can realistically evaluate their projects and capture details. This application facilitates aesthetic, functional and accurate designs by offering the opportunity to work live with a 360° panoramic virtual tour, showing realistic space, natural and artificial lighting, material, furniture and color changes instantly. It also contributes to the solution of scale problems that may occur.

AR supports the design process of interior architecture students and helps in the idea development phase. Through digital glasses and tablets, students can easily revise their ideas and develop alternative solutions while sketching and solving design problems (Gülel 2018: 80). This contributes to the flexibility and efficiency of the design process. Augmented Reality technology also offers a great support in presentation techniques. Through photo reality and interactive presentations, the communication between the student and the facilitator is positively strengthened. This shortens the presentation time, allowing individuals to have a more immersive

presentation experience. AR technology also facilitates file sharing and is relatively simple to adapt to the physical environment of studios, which saves time and materials and supports an environmentally friendly approach (Arabacıoğlu and Gülel 2019: 171).

In conclusion, the research clearly demonstrates that Augmented Reality provides significant contributions to interior architecture education and design process. The use of Augmented Reality technology is recommended to improve the quality of education of future interior architecture students and to train them in accordance with the requirements of the age. This method will contribute to Çankaya University's innovative and forward-thinking educational approach. This step, which will strengthen the university's contemporary and innovative image in education, will enrich the educational experience of interior architecture students and support them to step into the sector in a more prepared and equipped manner.

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APPENDICES

APPENDIX 1: ÇANKAYA UNIVERSITY INTERIOR ARCHITECTURE DEPARTMENT UNDERGRADUATE CURRICULUM

Total Course Credits: 158 – ECTS Credits: 240 – Total Course Hours: 187 (T: 129 hours / L: 58 hours) – Total Number of Courses: 54
T = Weekly Theoretical Course Hours, U = Weekly Practice Course Hours, K = Çankaya Credits, ECTS = European Credit Transfer System

FIRST YEAR

I. SEMESTER

Course Code	Course Name	T	U	K	ECTS	Pre-requisite	Equal
INAR 101	Temel Tasarım Basic Design	4	4	6	6		
INAR 141	Görsel Anlatım Teknikleri Visual Expressions	2	2	3	3		INAR 144
INAR 185	Çizim Standartları Drawing Standards	2	2	3	5		
INAR 165	İç Mimarlığa Giriş Introduction to Interior Architecture	2	0	2	3		INAR 151
MATH 117	Mimarlar için Geometri Geometry for Architects	3	0	3	3		
ENG 121	Akademik İngilizce I Academic English I	2	2	3	4		
TURK 101	Türkçe I Turkish I	2	0	2	3		
HIST 201	Atatürk İlkeleri ve İnkılap Tarihi I Principles of Atatürk and History of Turkish Revolution I	2	0	2	3		
	8 courses	**19**	**10**	**24**	**30**		

II. SEMESTER

Course Code	Course Name	T	U	K	ECTS	Pre-requisite	Equal
INAR 102	İç Mekan Tasarımına Giriş Introduction to Interior Design	4	4	6	6	INAR 101	
INAR 186	Yapı İnşası ve Malzemelerin Temelleri Basics of Construction and Materials	2	2	3	5	INAR 185	
INAR 122	Ergonomi Human Factors	2	0	2	3		INAR 135
INAR 166	Sanat ve Mimarlık Tarihi History of Arts & Architecture	2	0	2	3		INAR 251
INAR 188	Yapının İlkeleri Structural Principles	2	0	2	3		
ENG 122	Akademik İngilizce II Academic English II	2	2	3	4		
TURK 102	Türkçe II Turkish II	2	0	2	3		
HIST 202	Atatürk İlkeleri ve İnkılap Tarihi II Principles of Atatürk and History of Turkish Revolution II	2	0	2	3		
	8 courses	**18**	**8**	**22**	**30**		

SECOND YEAR

III. SEMESTER

Course Code	Course Name	T	U	K	ECTS	Pre-requisite	Equal
INAR 201	İç Mekan Tasarım Stüdyosu I Interior Design Studio I	4	4	6	9	INAR 102, INAR 185	
INAR 219	Bilgisayar Uygulamaları I Computer Applications I	1	2	2	3		INAR 114
INAR 287	İç Mekanlar için Yapım ve Malzeme Construction and Materials for Interiors	2	2	3	6	INAR 186	
INAR 225	Doğal ve Yapay Aydınlatma Natural and Artificial Lighting	2	0	2	3		INAR 209
INAR 265	Modern Sanat ve Mimarlık Modern Art & Architecture	2	0	2	3		INAR 252
ELECTIVE 1	Bölüm Seçmelisi Departmental Elective I	3	0	3	3		
ELECTIVE 2	Serbest Seçmeli Free Elective	3	0	3	3		
	7 courses	**17**	**8**	**21**	**30**		

IV. SEMESTER

Course Code	Course Name	T	U	K	ECTS	Pre-requisite	Equal
INAR 202	İç Mekan Tasarım Stüdyosu II Interior Design Studio II	4	4	6	9	INAR 201	
INAR 220	Bilgisayar Uygulamaları II Computer Applications II	1	2	2	3		INAR 217
INAR 288	Tasarım Detayları ve Bitiş Malzemeleri Design Details and Finishing Materials	2	2	3	6		
INAR 226	İç Mekan Isıl Konfor Indoor Thermal Comfort	2	0	2	3		INAR 210
INAR 266	Çağdaş Mimarlık Contemporary Architecture	2	0	2	3		
INAR 100	**Yaz Stajı** **Summer Practice**	0	0	0	6		
	6 courses	**11**	**8**	**15**	**30**		

THIRD YEAR

V. SEMESTER

Ders Kodu	Ders Adı	T	U	K	ECTS	Pre-requisite	Equal
INAR 301	İç Mekan Tasarım Stüdyosu III Interior Design Studio III	4	4	6	9	INAR 202	
INAR 331	Ürün Tasarımı Product Design	2	2	3	6		
INAR 325	Yapı Hizmetleri Building Service	2	0	2	3		
INAR 345	Sürdürülebilir Tasarım Sustainable Design	2	0	2	3		INAR 380
INAR 341	Çevresel Psikoloji Environmental Psychology	2	0	2	3		INAR 422
ELECTIVE 3	Fakülte Seçmelisi Free Elective	3	0	3	3		
ELECTIVE 4	Bölüm Seçmelisi Departmental Elective II	3	0	3	3		
7 courses		**18**	**8**	**22**	**30**		

VI. SEMESTER

Ders Kodu	Ders Adı	T	U	K	ECTS	Pre-requisite	Equal
INAR 302	İç Mekan Tasarım Stüdyosu IV Interior Design Studio IV	4	4	6	9	INAR 301	
INAR 332	Modüler Sistemler Modular Systems	2	2	3	6		
INAR 326	Mimari Akustik Architectural Acoustics	2	0	2	3		
INAR 346	Renk İlkeleri Color Principles	2	0	2	3		
INAR 342	Kentsel İç Mekanlar Urban Interiors	2	0	2	3		
INAR 300	**Yaz Stajı** **Summer Practice**	0	0	0	6		
6 courses		**12**	**6**	**15**	**30**		

FOURTH YEAR

VII. SEMESTER

Ders Kodu	Ders Adı	T	U	K	AKTS	Pre-requisite	Equal
INAR 401	İç Mekan Tasarım Stüdyosu V Interior Design Studio V	4	4	6	12	INAR 302	
INAR 425	Mesleki Uygulama ve Etik Professional Practice & Ethics	2	2	3	6		
INAR 441	İç Mekanlar için Restorasyon Restoration for Interiors	2	0	2	3		
ARCH 441	İş Sağlığı ve Güvenliği I Occupational Health and Safety I	2	0	2	3		
ELECTIVE 5	Bölüm Seçmelisi Departmental Elective III	3	0	3	3		
ELECTIVE 6	Bölüm Seçmelisi Departmental Elective IV	3	0	3	3		
6 courses		**16**	**6**	**19**	**30**		

VIII. SEMESTER

Ders Kodu	Ders Adı	T	U	K	AKTS	Pre-requisite	Equal
INAR 402	İç Mekan Tasarım Stüdyosu VI Interior Design Studio VI	4	4	6	15	INAR 401	INAR 410
ARCH 442	İş Sağlığı ve Güvenliği II Occupational Health and Safety II	2	0	2	3		INAR 412
ELECTIVE 7	Bölüm Seçmeli Departmental Elective V	3	0	3	3		
ELECTIVE 8	Bölüm Seçmelisi Departmental Elective VI	3	0	3	3		
ELECTIVE 9	Bölüm Seçmelisi Departmental Elective VII	3	0	3	3		
ELECTIVE 10	Bölüm Seçmelisi Departmental Elective VIII	3	0	3	3		
6 courses		**18**	**4**	**20**	**30**		

APPENDIX 2: PHENOMENOLOGICAL QUESTIONNAIRE

Bu anket Çankaya Üniversitesi Tezli İç Mimarlık Yüksek Lisans Bölümünde öğrenci olan Aybike Koçoğlu tarafından akademik araştırma amacıyla hazırlanmıştır. Etik kurallar çerçevesinde kişisel bilgileriniz veri koruma kanununca gizli kalacaktır.

THE EFFECT OF THE COVID-19 PANDEMIC ON EDUCATION IN INTERIOR ARCHITECTURE: STUDENTS AND TEACHERS' POINTS OF VIEW

1. Cinsiyetiniz nedir?
   O Kadın O Erkek
2. İç mimarlık eğitiminde en zorlandığınızı hissettiğiniz ders hangisiydi? Sebebini kısaca açıklar mısınız?

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3. Uzaktan eğitim sürecinde hangi derslerde sorun yaşadınız? Neden?

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4. Hangi derslerde kendinizi ifade etmede daha çok problem yaşadığınızı düşünüyorsunuz? Sebebini kısaca açıklar mısınız?

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5. Stüdyo derslerinde karşılaştığınız sorunlar nelerdir? (Yüz yüze / Hibrit / Online)

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6. Sizce iç mimarlık eğitimi nasıl verilmeli? (Yüz yüze / Hibrit / Online) Sebebini kısaca açıklar mısınız? *Lütfen teorik ve uygulamalı dersler için ayrı ayrı belirtiniz.*

1

7. Sizce stüdyo eğitiminde başarıyı arttıracak faktörler nelerdir?

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8. Stüdyo derslerinde kritiklerin anlaşılabilir olması için proje gösterimi sizce pafta üzerinden mi yoksa dijital ekran üzerinden mi verilmeli? (Yüz yüze / Hibrit / Online)

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9. Yüz yüze eğitimde stüdyo derslerine hangi dijital ekipmanlar dâhil edilebilir ve katkısı sizce ne olur?

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10. Sizce teknoloji kullanımı akademisyen - öğrenci iletişimini kolaylaştırdı mı?

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11. İmkânınız olsaydı iç mimarlık eğitiminde ne gibi yenilikler yapmak isterdiniz?

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12. Sanal gerçeklik teknolojileri sizce tasarım stüdyolarında nasıl bir etki yaratır ve hangi ihtiyaçları karşılar?

APPENDIX 3: MIX TYPE QUESTIONNAIRE

ANKET FORMU

Bu anket Aybike KOÇOĞLU tarafından Çankaya Üniversitesi İç Mimarlık Bölümü'nde yürütülmekte olan "The Effect of the Covid-19 Pandemic on Interior Architecture Education: Students' Point of View" / "Covid-19 Pandemisinin İç Mimarlık Eğitimine Olan Etkisi: Öğrenci Değerlendirmesi" başlıklı yüksek lisans tez çalışması için yapılmaktadır. Sizlerden edinilecek olan bilgiler tamamen bilimsel amaçlı kullanılacak olup, üçüncü şahıslar ile paylaşılmayacaktır. Kişisel bilgileriniz etik kurallar çerçevesinde 6698 sayılı Kişisel Verilerin Korunması Kanununca gizli kalacaktır. Değerli katkılarınızdan dolayı şimdiden çok teşekkür ederim.

* Zorunlu soruyu belirtir

ÖNEMLİ NOT: Anketteki tüm cevap şıklarının rahatlıkla görülebilmesi için **bilgisayar ortamında doldurulması** önerilmektedir. Cep telefonundan katılım sağlıyorsanız lütfen **telefonunuzun ekranını yan çevirip** soru hakkındaki **tüm şıkları** gördüğünüzden emin olduktan sonra cevaplayınız.

A- Lütfen size uygun cevabı işaretleyiniz.

1. Cinsiyetiniz nedir? *

   Yalnızca bir şıkkı işaretleyin.

   ◯ Kadın
   ◯ Erkek

2. Yaşınız nedir? *

3. Çankaya Üniversitesi İç Mimarlık Bölümünde hangi yıllar arasında eğitim aldınız? *
   (Örneğin: 2019-2023 gibi yazınız.)

4. Çankaya Üniversitesi İç Mimarlık Bölümü **uzaktan eğitim modelinde** hangi cihazları ne sıklıkta kullandınız? *

Cevaplar (En çok, Çok, Orta, Az, Çok Az ve Hiç Kullanmadım) şeklindedir.

Her satırda yalnızca bir şıkkı işaretleyin.

	En Çok	Çok	Orta	Az	Çok Az	Hiç Kullanmadım
Masaüstü Bilgisayar	◯	◯	◯	◯	◯	◯
Dizüstü Bilgisayar	◯	◯	◯	◯	◯	◯
Tablet	◯	◯	◯	◯	◯	◯
Cep Telefonu	◯	◯	◯	◯	◯	◯

5. Çankaya Üniversitesi İç Mimarlık Bölümü **uzaktan eğitim modelinde** en sık hangi teknik sorunları yaşadınız? (Birden fazlaysa lütfen hepsini işaretleyiniz.) *

Uygun olanların tümünü işaretleyin.

- [ ] Elektrik Kesintisi
- [ ] İnternet Kesintisi
- [ ] Bilgisayar Kaynaklı Sorunlar
- [ ] Zoom Bağlantı Sorunu
- [ ] Ses Kalitesi Sorunu
- [ ] Görüntü Kalitesi Sorunu
- [ ] Herhangi bir sorun yaşamadım.
- [ ] Diğer: _____

6. Çankaya Üniversitesi İç Mimarlık Bölümü **uzaktan eğitim modelinde** kayıt edilen dersleri daha sonra tekrar izlediniz mi? Cevabınız evet ise, yararlı oldu mu? *

Yalnızca bir şıkkı işaretleyin.

- ◯ Evet, tekrar yapmamda yararlı oldu.
- ◯ Evet, ama yararlı olmadı.
- ◯ Hayır, dersleri tekrar izlemedim.
- ◯ Diğer: _____

7. Sizce Çankaya Üniversitesi İç Mimarlık Bölümünde **'İç Mekân Tasarım Stüdyosu'** dersinin yürütülüş biçimi nasıl olmalıdır? *

Her satırda yalnızca bir şıkkı işaretleyin.

	Hiçbir zaman	Nadiren	Çoğunlukla	Her zaman
Birebir kritik	◯	◯	◯	◯
Ders yürütücüleri ile toplu kritik	◯	◯	◯	◯
Ders yürütücüleri ve öğrencilerle birlikte tartışmalı kritik	◯	◯	◯	◯

B- Lütfen eğitim gördüğünüz Çankaya Üniversitesi İç Mimarlık Bölümü **'İç Mekân Tasarım Stüdyosu'** derslerini düşünerek, yargılara uyum düzeyinizi belirtiniz.

Cevaplar (Kesinlikle Katılmıyorum, Katılmıyorum, Ne Katılıyorum Ne Katılmıyorum, Katılıyorum ve Kesinlikle Katılıyorum) şeklindedir.

Seçeneklerin hepsini görebilmek için lütfen telefonunuzun ekranını yan çeviriniz.

8. Sizce Çankaya Üniversitesi İç Mimarlık Bölümünde **'İç Mekân Tasarım Stüdyosu'** derslerinin daha verimli geçmesi için hangi yöntemler kullanılmalıdır? (Birden fazlaysa lütfen hepsini işaretleyiniz.) *

Uygun olanların tümünü işaretleyin.

- [ ] Yüz Yüze Ders Anlatımı
- [ ] Konu Anlatım Videolarının Paylaşılması
- [ ] Dijital Ders Dosyalarının Paylaşılması (PDF/PPT)
- [ ] Ders Yürütücüsü ve Öğrenci Etkileşimli Yöntem
- [ ] Pafta Üzeri Kritik Verilmesi
- [ ] Dijital Çizime Kritik Verilmesi
- [ ] Saha/Alan Gezisi Yapılması
- [ ] VR (Virtual Reality) Sanal Gerçeklik Gözlük Kullanılması
- [ ] 3 Boyutlu Çizim Yapılması
- [ ] Maket Yapılması
- [ ] Gerçek Malzeme Tanıtımı Yapılması
- [ ] Stüdyo İçi Çalışmalar Verilmesi
- [ ] Ev Çalışmaları Verilmesi
- [ ] Diğer: _____

9. Çankaya Üniversitesi İç Mimarlık Bölümünde **uzaktan eğitim modelinde** uzun süre bilgisayar başında zaman geçirmek sizde herhangi bir sağlık problemi yarattı mı? (Birden fazlaysa lütfen hepsini işaretleyiniz.) *

Uygun olanların tümünü işaretleyin.

- [ ] Bel Ağrısı
- [ ] Baş Ağrısı
- [ ] Mide Bulantısı
- [ ] Göz Yorgunluğu
- [ ] Odaklanma Problemi
- [ ] Obezite
- [ ] Uyku Bozukluğu
- [ ] Psikolojik Rahatsızlıklar
- [ ] Herhangi bir sağlık problemi yaşamadım.
- [ ] Diğer: _____

10. TEKNOLOJİ ve DERS MEMNUNİYET ANALİZİ *

Her satırda yalnızca bir şıkkı işaretleyin.

	Kesinlikle Katılmıyorum	Katılmıyorum	Ne Katılıyorum Ne Katılmıyorum	Katılıyorum	Kesinlikle Katılıyorum
Uzaktan eğitim esnasında internet bağlantımda herhangi bir sorun yaşamadım.	◯	◯	◯	◯	◯
Evdeki çalışma ortamım uzaktan eğitim için uygundu.	◯	◯	◯	◯	◯
Eğitimde teknoloji entegrasyonunun verimliliği arttırdığını düşündüm. (Dijital eskiz, Zoom Bağlantısı gibi.)	◯	◯	◯	◯	◯
2B çizim programlarını kullandığımda daha iyi mekan tasarımı yaptığımı düşündüm.	◯	◯	◯	◯	◯
3B modelleme programlarını kullandığımda mekanı daha iyi algıladığımı düşündüm. (Strüktür, işlevsellik, ışık, renk, malzeme vs.)	◯	◯	◯	◯	◯
2B/3B çizim ve modelleme programları üzerinden anlaşılır şekilde kritik alabildim.	◯	◯	◯	◯	◯
Çankaya Webonline'ı kullanmakta zorlanmadım.	◯	◯	◯	◯	◯

C - Sorular *'Bu eğitim modelinde ……'* kalıbıyla başlayıp, aşağıda sıralanan cümleler ile devam etmektedir. Lütfen eğitim gördüğünüz Çankaya Üniversitesi İç Mimarlık Bölümü **'İç Mekân Tasarım Stüdyosu'** derslerinin eğitim ve uygulamalarını düşünerek, yargının aşağıda belirtilen hangi eğitim modeline daha uygun olduğunu belirtiniz.

Cevaplar (Eski Yüz Yüze Eğitim, Acil Uzaktan Eğitim, Uzaktan Eğitim, Hibrit Eğitim ve Yeni Yüz Yüze Eğitim) şeklindedir.

Seçeneklerin hepsini görebilmek için lütfen telefonunuzun ekranını yan çeviriniz.

Eğitim Modelleri;

Eski Yüz Yüze Eğitim Modeli (Pandemi öncesi Örgün Eğitim) - 2019/2020 Güz Dönemi

Acil Uzaktan Eğitim Modeli (Zoom gibi dijital platformların kullanılmaya başlanması ve uzaktan eğitim modeline geçiş) - 2019/2020 Bahar Dönemi

Uzaktan Eğitim Modeli (Zoom bağlantısı ile ders işlenmesi ve uzaktan eğitim) - 2019/2020 Bahar ve 2020/2021 Güz Dönemi

Hibrit Eğitim Modeli (Derslerin hem üniversitede yüz yüze hem de üniversite dışında olan öğrencilerle uzaktan bağlantı kurularak ortak yapılması) - 2021/2022 Güz Dönemi

Yeni Yüz Yüze Eğitim Modeli (Pandemi sonrası yeni eğitim modeline geçiş) – 2021/2022 Bahar Dönemi

11. Çankaya Üniversitesi İç Mimarlık Bölümü **'İç Mekân Tasarım Stüdyosu'** dersleri kapsamında aşağıdaki uygulamaları hangi eğitim modelinde daha çok kullandınız? (Bir eğitim modelinden fazlaysa lütfen işaretleyiniz.) *

Uygun olanların tümünü işaretleyin.

	Eski Yüz Yüze Eğitim	Acil Uzaktan Eğitim	Uzaktan Eğitim	Hibrit Eğitim	Yeni Yüz Yüze Eğitim
Çankaya Webonline	☐	☐	☐	☐	☐
E-posta	☐	☐	☐	☐	☐
WhatsApp	☐	☐	☐	☐	☐
Zoom	☐	☐	☐	☐	☐

12. EĞİTİM MODELLERİ MEMNUNİYET ANALİZİ *

Her satırda yalnızca bir şıkkı işaretleyin.

	Eski Yüz Yüze Eğitim	Acil Uzaktan Eğitim	Uzaktan Eğitim	Hibrit Eğitim	Yeni Yüz Yüze Eğitim
Uygulamalı dersler için daha uygun olduğunu düşündüm.	◯	◯	◯	◯	◯
Teorik dersler için daha uygun olduğunu düşündüm.	◯	◯	◯	◯	◯
Ara vermeden uzun süren dersler yapılması daha verimliydi.	◯	◯	◯	◯	◯
Derse daha çok katılım sağladım.	◯	◯	◯	◯	◯
Derslere daha kolay odaklanabildim.	◯	◯	◯	◯	◯
Derslere başlarken kendimi daha mutlu ve motive hissettim.	◯	◯	◯	◯	◯
Tasarım sürecini programlamamda esneklik sağladı. Böylece projemde daha hızlı ilerledim.	◯	◯	◯	◯	◯
Daha çok araştırma yapma imkânı buldum.	◯	◯	◯	◯	◯
İşlenen dersin tasarımlarımdaki başarımı daha çok arttırdığını fark ettim.	◯	◯	◯	◯	◯

Jürilerde daha başarılı oldum.					
Anlatılan konuyu bir başkasına kolayca anlatabilecek kadar net anladım.					
Kendimi daha rahat hissederek kritik aldım.					
Başka bir öğrencinin kritiğini dinleyerek kendi projemdeki hataları daha kolay fark edip, revize ettim.					
Arkadaşlarımın projelerinde ilerlemelerini daha net gözlemleyebildim.					
2 ve 3 boyutlu düşünebilme yetimin daha çok geliştiğini farkettim.					
2 ve 3 boyutlu çizim becerimin daha çok geliştiğini deneyimledim.					
Daha fazla zaman tasarrufu sağladım.					
Daha fazla maddi tasarruf sağladım.					
Kâğıt ve maket malzemesi kullanımı (çevresel atık miktarı) daha azdı.					

Arkadaşlarımla daha çok sosyalleşme imkânı buldum.					
Derslere, okula ve eğitmenlere karşı aidiyet duygumun daha fazla olduğunu hissettim.					
Arkadaşlarım ve eğitmenlerimle daha iyi iletişim kurduğumu hissettim.					
Ders esnasında eğitmenlere çekinmeden daha rahat soru sorabildim.					
Eğitmenler ders içeriği,sınavlar ve ödevler hakkında daha anlaşılır bilgilendirme yaptı.					
Eğitmenlerden daha hızlı geri bildirim aldım.					
Eğitmenlerden sorularıma daha açıklayıcı ve yeterli cevap alabildim.					
İş hayatına yönelik olarak daha verimli buluyorum.					

13. Beş eğitim modelini de deneyimlemiş öğrenciler olarak, gelecekte bu eğitim modellerinin İç Mimarlık bölümüne uygulanabilirliği hakkında genel düşünceleriniz nelerdir? *