# PROSTOR

Af

Number of universities that do not include HSRP courses in their Interior Architecture Department curricula

28

The number of universities that include a compulsory course with HSRP content in their Interior Architecture Department curricula

8

Number of universities with Interior Architecture Department in Turkey and TRNC

58

Number of universities where HSRP content course is available in Interior Architecture Departments

17

Number of universities that include HSRP as an elective course in their Interior Architecture Department curricula

9

Number of universities whose Interior Architecture Department curricula are not accessible
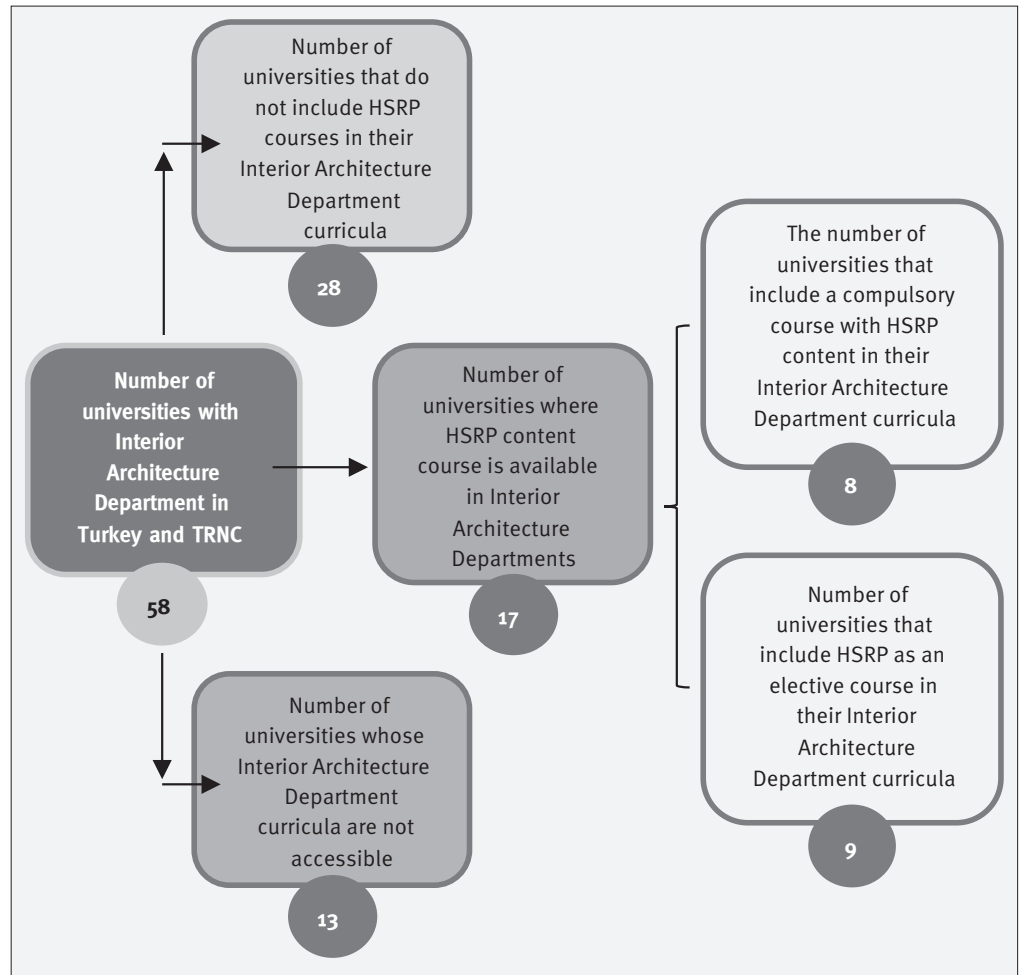
13

Fig. 1 The number of universities in Turkey and the TRNC that have an Interior Architecture department and offer courses on HSRP content

# Beren Aygenç[1], Çimen Özburak[2]

[1] Near East University, Faculty of Architecture, Department of Interior Architecture, Nicosia, Turkish Republic of Northern Cyprus
　https://orcid.org/0000-0001-8337-1808

[2] Near East University, Faculty of Architecture, Department of Architecture, Nicosia, Turkish Republic of Northern Cyprus
　https://orcid.org/0000-0002-8661-4403

berenaygenc@gmail.com
cimen.ozburak@neu.edu.tr

# The Role and Significance of Human-Space Relationship and Psychology in Interior Architecture and Architectural Education
## A Proposed Training Model

Each geographic location has its own unique architectural language and characteristics. Therefore, it is important to acknowledge that architectural design cannot be universally suitable for every geography. To be able to think, calculate, evaluate and analyse all these and more at every scale is possible with 'human-space relationship and psychology' (HSRP). For this reason, HSRP seems to be a lerning necessity for architecture students, especially interior architecture departments, in undergraduate education processes. The study started by determining the position of architecture and interior architecture education and HSRP in undergraduate education.

Based on the findings obtained and analysed, an education model on HSRP was developed and applied to interior architecture and architecture undergraduate students in three different academic terms. The HSRP education model combined theoretical subjects and activities, and the students' cognitive levels were measured at the beginning and end of the academic term. Quantitative data demonstrated that the developed education model made the subject more comprehensible to the students compared to a purely theoretical approach. This emphasised the importance and necessity of the course.

## INTRODUCTION: ARCHITECTURE AND INTERIOR ARCHITECTURE EDUCATION

The craft of architecture has progressed through a master-apprentice relationship and traditional methods. During the Renaissance period, it became a discipline and gained popularity through training in European fine arts academies in the 17th century. The establishment of architecture schools in America during the 19th century was influenced by the Royal Academy of Art and Beaux-Arts schools in England at the end of the 18th century (Wilton-Ely, 2000; Draper, 2000; Roth, 2007: 159-164). Degree architects, who receive architectural education within certain curricula, plans, and rules, became widespread. As a result, the Royal Institute of British Architects was established in 1834, and the American Institute of Architects was established in 1857. This led to the acceptance of architecture as a profession in modern society (Sadri and Zeybekoğlu Sadri, 2013). The number of interior architecture departments in Turkey remained relatively stable until the 1990s, but experienced a rapid increase thereafter, primarily within foundation universities (Adıgüzel, 2011: 39). In the 21st century, architecture, interior architecture, and landscape architecture have become an integrated structure, despite their distinct education processes. Together, they form a large-scale cluster that includes different disciplines. It is important to note that architecture cannot be considered independent from interior architecture, environmental design, and landscape. Although architecture, interior architecture, and landscape architecture are distinct fields, they are all part of the broader architectural discipline. Therefore, they can be collectively referred to as architectural disciplines. There are also many parallels in terms of content between architecture and interior design departments at universities, although they share common and similar courses. However, while the curricula of interior architecture and architecture departments show similarities, they are generally planned independently from each other (Eriş and Ağan, 2020: 425). The common thread that runs through all architectural disciplines is design. Architectural disciplines must consider scientific realities such as physics, mathematics, and geography to create sustainable designs. Competence in one discipline does not guarantee the ability to create sustainable design. Sustainability should not be limited to theoretical or material-structural relationships. Designs must also consider human use. The existence of a structure requires a challenging process. Therefore, every design must be subject to correct mathematical and physical calculations, be suitable for the geography in which it will be located, have structure-material compatibility and be in tune with the needs of the people it will serve.

The field of interior architecture aims to create designed environments that maximize efficiency for their users. Interiors are the physical spaces closest to humans, so it is crucial for interior architects to ensure that their designs are fully integrated with the user (Aygenç, 2020). The relationship between humans and their physical environment is revealed through the effects of space on human psychology (Göka, 2001). Interiors, which are most in contact with people in daily life, are shaped by the subjective and psychological processes and experiences of life and are shaped by the different identities that people attribute to the space with their transformation into consciousness and memories (Solak, 2017: 14). Individuals expect their physical, social, and psychological needs to be met in the spaces where they spend most of their lives. To meet these needs, designers should create appropriate interior spaces and predict their variability in advance for possible situations (Aygenç, Özburak and Uzunoğlu, 2020). To achieve this, it is essential to understand the relationship between humans and their environment, including psychology. When considering this subject and the items it depends on within its scope, design should be in harmony with the user. For this reason, the relationship between humans and space, as well as psychology, should be at the centre of every design that starts from scratch or undergoes restoration.

This approach shall ensure that design is sustainable in every sense. Human beings constantly adapt to their physical environment and modify it accordingly. However, these modifications can create new effects and lead to a new process of adaptation. Therefore, the relationship between humans and their environment is an infinite circle of internal dynamics (Bozdayı, 2004: 20). A design that fails to connect with the people of the region it belongs to, even if it is made with the latest technology and the best materials, will not be socially sustainable. It is possible to look at the perception of space, which is the subject of the human-space relationship, at different scales such as the urban scale. From this point of view, urban perception focuses on the process of reading and understanding the city by the user, similar to what people experience in the interior (Lynch, 2010: 51-87). The significance of interior architecture in undergraduate education is evident from these characteristics. As architectural historians have noted, the places where people reside reflect their social and cultural values and serve as formal indicators of the existence of individuals and societies, rather than being mere physical shelters. This holds true for all periods and countries. When humans create physical environments, they also create symbolic formations that express their value systems. This spatial process is a psychological result of human needs to adapt to the world (Aygenç, 2020). Therefore, the course name chosen for the study is 'Human-Space Relationship and Psychology' (HSRP).

## AIM, SCOPE AND METHODOLOGY OF THE STUDY

The aim of the study is to reveal that it is necessary to include a course on human-space relationship and psychology in the undergraduate education programmes of architectural design fields. With this aim in mind, answers to the following questions have been offered:

Human-space relationship and psychology field;

1. How important is it for interior architecture and architectural disciplines?

2. Which subjects should it cover?

3. What should be its place in the undergraduate education process?

4. How should it be included in undergraduate education with a more efficient and understandable model?

In order to explain the importance of human-space relationship and psychology in undergraduate education in architectural disciplines, especially in the field of interior archi-

tecture, the current situation of the subject in the universities of Turkey (TC) and the Turkish Republic of Northern Cyprus (TRNC) was investigated; based on this, an educational model was developed and implemented in the Faculty of Architecture of Near East University in three different academic periods.

The study exhibits qualitative research characteristics in terms of subject content and type. Both qualitative and quantitative analyses were conducted. The qualitative analyses were obtained by collecting theoretical data from literature reviews and internet research, while the applications were carried out with undergraduate students from the Department of Interior Architecture and Architecture at the Faculty of Architecture, Near East University. The course prepared according to the HSRP model was offered as a faculty elective course to undergraduate students who had completed their first year. The HSRC education model was implemented over three academic semesters for Interior Architecture and Architecture students who chose the course. A total of 27 students completed the applications based on their preferences. One limitation of the study is the number of students to whom the education model was applied. This is because the HSRP model is an elective course in the curriculum of Near East University Faculty of Architecture Undergraduate Education, and was selected based on student preferences. To collect data, a questionnaire was administered to the students with the report obtained from the Near East University Scientific Research Ethics Committee. To measure the cognition levels of the students, questionnaires were administered at the beginning and end of each semester in which the elective HSRP course was offered. Data was collected six times using questionnaires, as the proposed education model was applied in three different academic semesters. Thus, quantitative values were revealed as a result of questionnaire applications. With this structure, the study has progressed as a field study consisting of surveys, observations and evaluations, and a training model on human-space relationship and psychology has been created, implemented, tested and finalised.

## METHODS AND DATA: INTERIOR ARCHITECTURE EDUCATION AND HSRP MODEL

Interior architecture is a professional field that deals with designing functional and aesthetically pleasing spaces to meet the needs of individuals. It was first recognised as a profession in the 1950s (Saraf, 2013). In 1970, the FIDER (Foundation of Interior Design Accreditation) and later the CIDA (Council for Interior

TABLE I UNIVERSITIES AND COURSES THAT INCLUDE HSRP IN THEIR COMPULSORY OR ELECTIVE CURRICULA

| No | University Name | Com-pulsory | Elec-tive | Course name |
|---|---|---|---|---|
| 1. | Ihsan Doğramacı Bilkent University | + | | Human and Environment |
| 2. | Cankaya University | + | | Environmental Psychology |
| 3. | Beykent University | + | | Environment Psychology |
| 4. | Baskent University | + | | Human and Environment interaction Human, Environment and Space |
| 5. | Atılım University | + | | Environment Psychology |
| 6. | Okan University | + | | Psychology of Space |
| 7. | TOBB Economy and Technology University | + | | Environment Psychology |
| 8. | Hacettepe University | + | | Environment Psychology |
| 9. | İzmir Economy University | | + | Environment-Behavior Studies |
| 10. | Istanbul Arel University | | + | Human and Environment Relationships |
| 11. | Toros University | | + | Environment Psychology |
| 12. | Fatih Sultan Mehmet University | | + | Perception and Psychology of Space Environment and Behavior Relationships |
| 13. | Altınbas University | | + | Human, Environment and Space |
| 14. | Nuh Naci Yazgan University | | + | Human Space Relationship |
| 15. | Karadeniz Tecnical University | | + | Human Space Relationship Environment Psychology |
| 16. | İstanbul Tecnical University | | + | Environmental Psychology |
| 17. | Konya Food and Agriculture University | | + | Environmental Psychology |

Design Accreditation) accreditation councils were established in the United States to determine the standards for the interior architecture profession and education. Similarly, in 1992, the ECIA (European Council of Interior Architects) was established in Europe. In Turkey, the first interior architecture education program began in 1925 at Sanay-i Nefise Mektebi (now Mimar Sinan Fine Arts University). Subsequently, Marmara University was founded in 1957, followed by Hacettepe University in 1985. Interior architecture departments were also established in foundation universities around the same time, bringing the total number of universities offering this program to 105 today. Currently, 59 of these universities are active in education, while the rest do not provide education. In Turkey today, the Bologna process has led to the implementation of the Turkey Higher Education Qualifications Framework. This framework requires the establishment of common educational standards to prevent disparities in education within the same field. The distribution of interior design departments in Turkey according to their establishment years is as follows: 4 universities before 1990, 14 universities between 1990-1999, 18 universities between 2000-2010, and 23 universities between 2010-2015 (Sevinç, Çakır and Ilal, 2015). Currently, the number of interior design departments in Turkey and Northern Cyprus has reached 58 (Fig. 1). As with all academic fields, there is a common path for interior design departments, but

the faculties, courses, or course contents to which the departments are affiliated may differ. Although they may be under different faculty names or have different courses, the goal of all departments that provide interior design education is undoubtedly the same: to train qualified, competent, and open-minded interior designers.

The study was conducted based on Turkey and the Turkish Republic of Northern Cyprus (TRNC), with data collection taking place in the TRNC. Interior design departments and universities in Turkey already include human-space relations and psychology in their curricula. The subject may be listed under different names in different universities. Since the relationship between humans and space is the subject of environmental psychology, it is mostly found under that name in various universities (Table I). Although the subject may be referred to by different names, their definitions reveal their content and meaning. This study examines the relationship between humans, the environment, and space, also known as environmental psychology or the psychology of human-space interaction. On the one hand, environmental psychology aims to establish itself as an applied psychological discipline, while on the other hand, it aims to understand psychological processes in the real world by establishing an internal relationship with psychology (Bonaiuto and Bonnes, 2000). Another definition of environmental psychology is the examination of the mutual relationships between the physical environment and human behavior (Gifford, 2007). Bell, Fisher and Baum (1996) attributed the emergence and rapid development of environmental psychology to urban and natural environmental problems. Göregenli (2010) identifies three separate disciplines as the background of human-environment relationship and psychology: psychological, geographical, and architectural backgrounds.

## HSRP (HUMAN-SPACE RELATIONSHIP AND PSYCHOLOGY) EDUCATION MODEL PROPOSAL

Table I shows that courses related to human-space relationships and psychology, which are offered under different names in universities are generally theoretical. However, as interior architecture involves both design and application, this study proposes an education model that includes theoretical explanations and practical activities for the HSRP course. The comprehension of the subject and the reinforcement of its activities are believed to require theoretical knowledge. Figure 2 shows the plan of the study and the
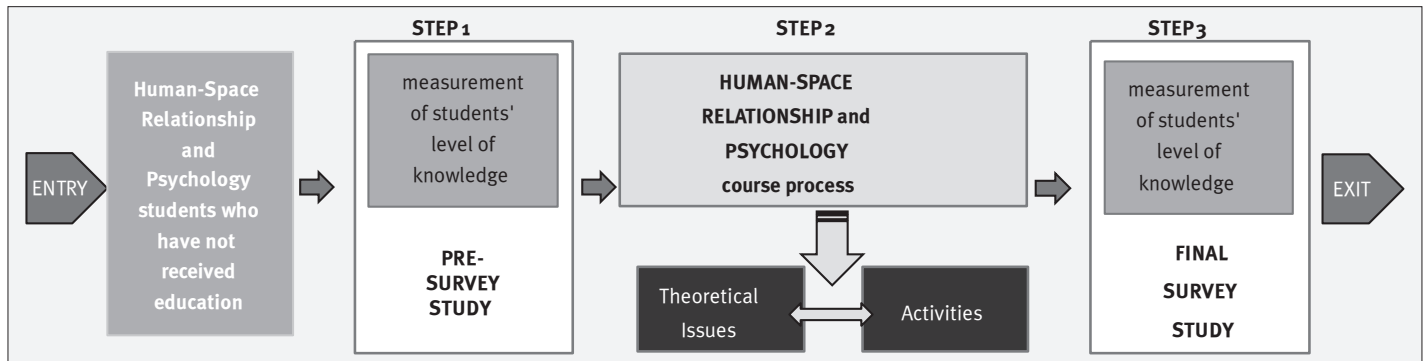
outline of the educational model developed for the HSRP course.

In order to support the theoretical topics (Fig. 3), activities were included in the scope of the course for all three semesters of the implementation. These activities were developed as the programme progressed. Each implementation of the HSRP educational model was delivered over a 14-week academic semester. The learning outcomes of the course are defined as follows. At the end of this course student should:

— Be able to discuss the basic issues relating to the human environment.

— Relate human behaviour, cognition and perception to the environment-space relationship.

— Be able to use the psychological effects of the human-space relationship as data for design.

— Understand the social and physical elements of the environment.

— Understand the importance of developing a human, social and environmental design approach.

— Be able to explain and discuss related concepts/theories.

— Critically analyse real-life applications under physical, social and economic constraints within a framework of aesthetic values and user needs.

— Synthesise different information and ideas and interpret the results.

— Be able to make preparation(s) for presentation.

— Evaluate own work according to given criteria.

— Be able to evaluate the work of his/her friends according to the given criteria.

— Have the ability to research and critique.

— Have the ability to communicate effectively with the user according to the knowledge

acquired and to design the space in accordance with the user.

All courses were included in the curriculum as 3 hours per week, 3 credits and 3 ECTS (European Credit Transfer System). In all implementations, theoretical subjects can be expressed as 30% and activities as 70%. However, although the theoretical issue is expressed at a lower rate here, it constitutes the basis. It has been possible to support this foundation with activity projects and even to transfer new theoretical knowledge through them. Figure 4 shows the final state of the relationship between activity and theoretical subjects during the 14-week course period as the course progressed. The relationship between activity and subject and the programme shown in Fig. 4 was met by the students in 'Implementation 3'. At the end of the course, students' final
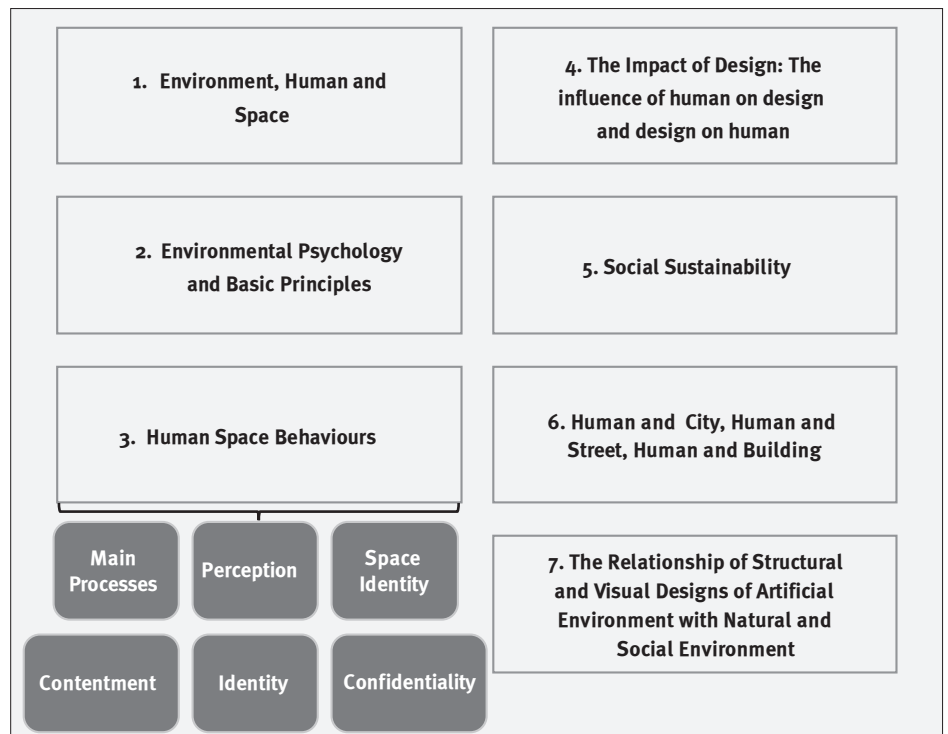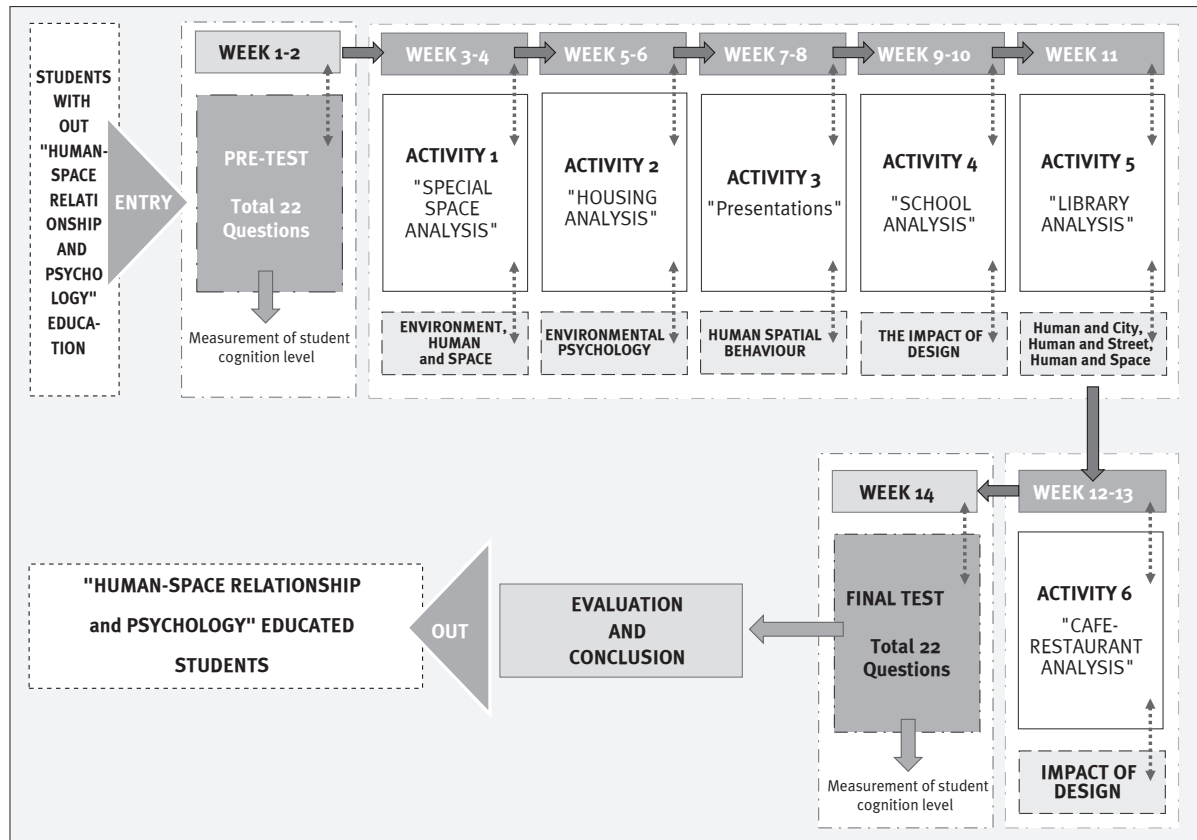
grades were determined by averaging these 6 activity project submissions. The students carried out and completed the activity projects individually. In 'Implementation 3', only 'Activity 3' was purely theoretical. In this activity students were given different topics to research within the course topics and were asked to make presentations. For each of the other activities, a list of criteria was created, the students were first asked to make their own analyses, and then they were given the list of criteria and asked to complete their analyses and activity projects (Figs. 5 and 6). In this way, students could clearly see what they were missing and what they needed to pay attention to. List of criteria for space analyses under the headings of form, material, colour, texture and light were combined with the information from the theoretical topics (Fig. 3) within the framework of the course topic (Figs. 5 and 6). It is intended that activities always be subject to change, while the theoretical topics within the course subject remain the same. This is because the implementations are the key point for understanding the topics and revising them according to the current period will make them more understandable.

The activities shown above progress from small to large scale (Fig. 4). In addition, for each activity, the places that students come into contact with in their daily lives were selected (Tables II and III). In this way, the activities helped the students to analyse the places they frequently come into contact with in the context of the discipline they are studying. Below are the tables with the details of 'Activity 1' and 'Activity 6' (Tables II and III). These two activities were chosen and detailed because they express the smallest and the largest scale to be analysed during the course.

In Fig. 5 students gave percentages for the list of activity criteria. This is because in this activity the students examined and analysed their own private spaces. In 'Activity 2' the scale is slightly larger and includes the analysis of their homes. Again, the students combined the list of criteria with the percentages of the spaces they used. The purpose of this activity can be expressed as follows:

– To transform abstract ideas about the living spaces contacted into concrete components and to be able to express their reasons.

– Each student informs the others about the human-space relationship for their own dwelling and contributes to the interactive functioning of the classroom.

– Evaluate the concepts of perception, spatial identity, satisfaction, belonging and privacy through different housing examples.

In 'Activity 3', in order to reinforce the theoretical issues, the following topics, which will contribute to the scope of the course subject, were assigned to the students and they were given the opportunity to make presentations:

– Colours: Meaning, use, application characteristics. Including sample designs and analysis according to design principles.

– Human-Space-Distance: What is distance? What is proxemics? Intimate space, personal space, social space and public space research and examples.

– Kevin Lynch: Who is he? What has he researched and proposed?

– Edward Hall: Who is he? What has he researched and proposed?

– Environmental Stress: What is stress and what causes it? What are environmental stressors?

– Social Withdrawal: What is it and what are the possible causes?

– Low Housing Quality: What is it and what are the possible causes?

These topics were distributed according to the number of students who chose the course to include different research. In 'Activity 4' and 'Activity 5' the students were asked to analyse their own faculties and the university library. These two activities aimed to reveal the differences and similarities in individual expectations and perceptions of the use of faculty and library spaces. In the last activity, 'Activity 6', a common place was identified and analysed that is most frequently visited in the geography in which they live (Table III and Fig. 6). Since 'Activity 4-5-6' refers to the places in a particular community, the criteria for this activity were determined accordingly and analysed with a Likert scale. In addition, added to the list of criteria a certain number of people was determined for the 'user contentment rate' (at least 20 users) and according to this number, the contact between the user and the students was ensured (Fig. 6).

According to the education model presented in Fig. 2, the course has been implemented for a total of three semesters: two in the Department of Interior Architecture and one in the Department of Architecture at the Faculty of Architecture of Near East University. Table IV and Fig. 7 demonstrate an increase in architecture students' awareness of the subject. Uzunoğlu and Özer (2014) also noted a direct relationship between architecture, human-space relationship, and psychology. The subject enables students to understand this relationship, as well as to comprehend and evaluate the connection between architectural problems and perception methodology.

Table II 'Implementation 3-Activity 1' information

| ACTIVITY 1 | |
|---|---|
| **Title of the Activity** | **"Special Space Analysis"** |
| **Description of the Activity** | * Each student will analyse the room in his or her dormitory where he or she lives.<br>* Design and presentation of the layout designs using A3 size horizontal paper.<br>* The sheets will include the layout plan of the house, the room plan, photographs of the room, materials and analyses in the context of the human-space relationship. |
| **Purpose of the Activity and Acquisition** | * Since each student lives in a different type of housing and in different types of spaces, their spatial characteristics and their relationships between people and spaces are also quite different from one another. For this reason, the aim is for students to develop an awareness of the different spaces with which they come into contact.<br>* The aim is for each student to consciously examine the spaces with which they are in contact for most of their lives. |
| **Related Course Topics** | Human-Space Relationship<br>Human-Space Psychology<br>User Contentment<br>User Identity<br>Perception of Space |

Table III 'Implementation 3 - Activity 6' information

| ACTIVITY 6 | |
|---|---|
| **Title of the Activity** | **"Cafe-Restaurant Analysis"** |
| **Description of the Activity** | * Analysing the café/restaurant space selected by the students from Nicosia Walled City within the scope of human-space relationship.<br>* Visiting and experiencing the place, taking photographs and analysing them within the scope of the criteria list.<br>* Making and presenting the layout designs by using A3 size paper horizontally.<br>* Layout plan, architectural space plan, photographs, materials and analyses of the cafe/restaurant within the scope of human-space relationship. |
| **Purpose of the Activity and Acquisition** | * To reveal the differences and similarities of each student's cafe-restaurant usage-expectation perception,<br>* It is aimed to show that the contentment rates of people who experience the same place may be different or similar.<br>* The reason for choosing a place in Nicosia Walled City as a location is that it is located in the common geography where the students' university is located, it is a place that every student knows and experiences, and it reflects the urban texture. |
| **Related Course Topics** | Human-Space Relationship<br>Human-Space Psychology<br>User Contentment<br>User-Confidentiality Relationship<br>Perception of Space<br>Space Identity |

According to Uzunoğlu and Özer (2014), these characteristics have been shown to result in learning gains for students. They are able to view their environment not only through the eyes of an architect or interior designer, but also through the lens of psychology, which they can then apply to their space designs. The field of human-space relationship and psychology offers insights into the impact of built and natural environments on mental and physical comfort. It provides guidance on how to improve the design of spaces in a supportive manner (Devlin, 2018).

The years and periods in which the implementations were carried out are given below:

– Implementation 1: 2021-2022 Spring Academic Semester Interior Architecture Department elective course (6 students);

– Implementation 2: 2022-2023 Autumn Academic Semester Department of Interior Architecture elective course (8 students);

**SPECIAL SPACE ANALYSIS**

**CRITERIA LIST and EVALUATIONS**

**1. Form (Floor-Ceiling-Walls-Furniture)**
— Sufficiency of volume — 30%
— Ensuring the necessary use of furniture — 30%
— Adequate use of windows — 70%

**2. Material**
— Compatibility of building material usage with geography — 80%
— Increasing the functionality of the use of furniture materials and textures — 80%
— The suitability of floor-material preferences to the space function — 80%
— The suitability of wall-material preferences for space function — 60%
— The suitability of ceiling-material preferences for space function — 50%
— Compatibility of window-material selection with geography — 50%
— Ensuring thermal comfort in all seasons with the preferred materials — 20%

**3. Texture**
— Texture preferences increase the duration of furniture use — 80%
— The suitability of wall, texture and colour to the function of the space — 10%
— The suitability of the floor, texture and colour to the space function — 80%
— Ceiling, texture and colour suitability for the function of the space — 80%

**4. Colour**
— The use of colour to provide the desired atmosphere of the space — 10%
— The use of colour to define the unity or difference in the space — 10%

**5. Light (Natural Light-Lighting)**
— Adequacy of the use of natural light — 80%
— Adequacy of the use of lighting elements — 60%
— Suitability of lighting element placement — 50%



FIG. 5 'IMPLEMENTATION 3 — ACTIVITY 1' STUDENT-1 PROJECT EXAMPLE

room plan
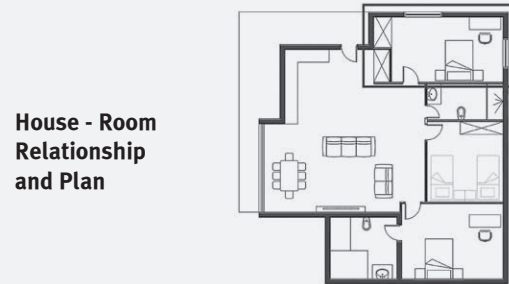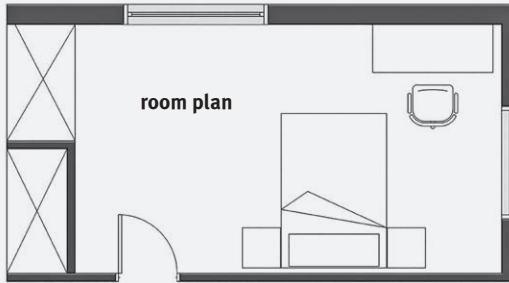
House - Room Relationship and Plan

— Implementation 3: 2022-2023 Spring Academic Semester Department of Architecture elective course (13 students).

The developed education model was applied to a total of 27 students through 'implementations 1, 2, and 3'. The course was offered as an elective and was available to both interior architecture and architecture students who had completed their first year. The requirement for students to have completed their first year before taking the course is because it is expected that the subject matter can be comprehended at that point. The HSRP education model was applied in a total of 3 different academic semesters, and as the implementations progressed, both the number of students increased and the proposed education model was developed.

**DATA ANALYSIS, FINDINGS AND RESULTS**

To measure students' cognitive levels, we administered the same questionnaire at the beginning and end of the HSRP courses. The purpose of the questionnaire was to evaluate the effectiveness of the course using scientific methods. The results revealed the progress made by the students at the end of the course. The questionnaire consisted of 22 evaluations related to environment-space-human relations.

Table IV contain 22 sentences related to environment-space-human relations. These sentences were answered by the students according to a 5-point Likert scale as Strongly Agree (1), Agree (2), Neither Agree nor Disagree (3), Disagree (4), Strongly Disagree (5) (1 = highest, 5 = lowest). Table IV contains evaluation sections that express the difference between the pre-test and post-test, as well as the post-test status of the students. To enhance the clarity of the differences between pre-test and post-test student awareness levels, we evaluated and presented the answers given for each HSRP training model application under three main headings (unconscious, undecided, and conscious) in Fig. 7. The percentage values for pre-test and post-test are provided for each heading. Thus, the students' answers in the HSRP education model implementations are presented in detail in Table IV and with general percentages in Fig. 7.

Table IV shows an increase in students' awareness of human-space relationship and psychology. The education model developed
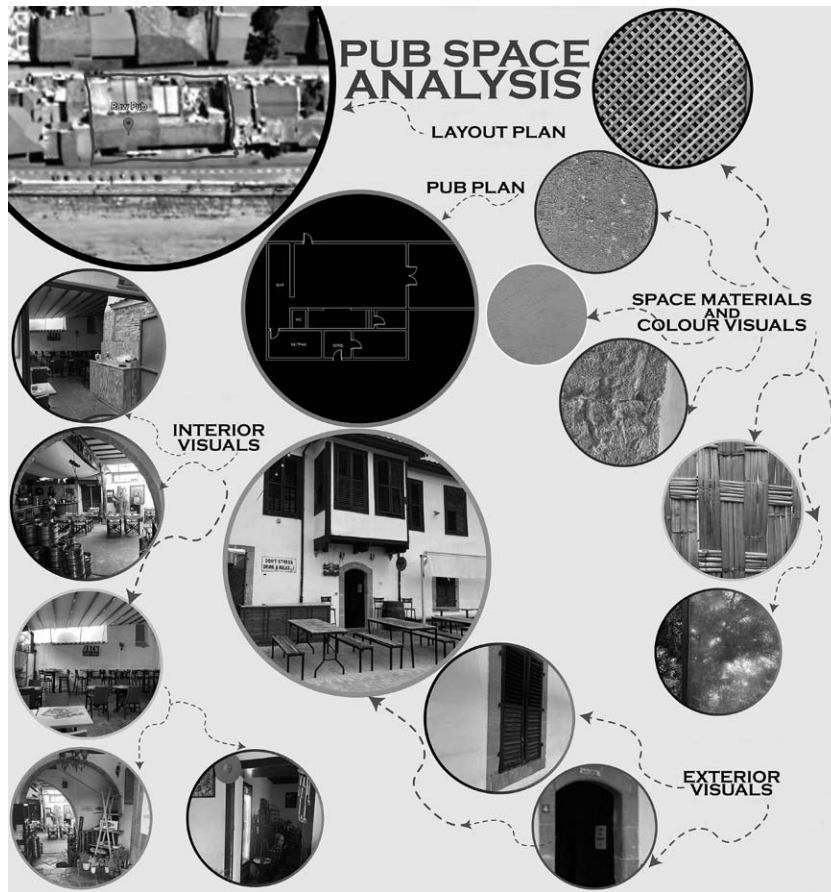
**CRITERIA LIST and EVALUATIONS**
Strongly Agree (1), Agree (2), Neither Agree nor Disagree (3), Disagree (4), Strongly Disagree (5)
(1 = highest, 5 = lowest)

**1. Form (Floor-Ceiling-Walls-Furniture)**
– Furniture choices were made in accordance with the function of the space – (4)
– Furniture choices were made suitable for the users of the space – (4)
– Furniture is positioned functionally – (3)
– Necessary and sufficient areas are provided for users – (2)
– Circulation areas are sufficient for both users and staff – (5)

– Toilet areas are positioned correctly in the space – (5)
– Kitchen area is positioned correctly in the space – (5)
– The bar area is positioned correctly in the space – (2)

**2. Material**
– The use of materials is compatible with geography – (4)
– Furniture-material selection was made according to the function of the space – (4)
– Floor-material preferences are suitable for the function of the space – (5)

– Wall-material preferences are suitable for space function – (5)
– Ceiling-material preferences are suitable for the space function – (4)

**3. Texture**
– Texture preferences were made in accordance with the function of the space – (4)
– Furniture texture preferences have a positive effect on usage – (5)
– Wall, texture and colour are suitable for the function of the space – (4)
– Floor, texture and colour are suitable for the function of the space – (4)
– Ceiling, texture and colour are suitable for the function of the space – (4)

**4. Colour**
– The use of colour has a positive effect on the atmosphere of the space – (3)
– Floor-colour selection was made in accordance with the function and identity of the space – (4)
– Ceiling-colour selection was made in accordance with the function and identity of the space – (4)
– Wall-colour selection was made in accordance with the function and identity of the space – (4)
– Furniture-colour selection was made in accordance with the function and identity of the space – (4)

**5. Light (Natural Light-Lighting)**
– The use of natural light is sufficient – (2)
– Areas with natural light are comfortable for users – (3)
– The use of lighting elements is sufficient – (2)
– Lighting element placement locations are preferred correctly – (3)

**6. Space Identity**
– Design decisions were made in accordance with the space identity – (3)
– The location of the space is harmonious according to the space identity – (2)
– Furniture preferences are appropriate according to the space identity – (3)

**7. User contentment**
– Space contentment rate for 27 users: 80%

through the implementation of the course in three different academic periods is detailed. Theoretical subjects are commonly shared among universities that offer the course in the interior architecture department. The education model developed for this study features theoretical subjects that are similar in content to those found in other universities. However, the HSRP education model places particular emphasis on student participation in activities. Figure 7 demonstrates the differences in student awareness levels between the pre-test and post-test of the im-

plementations. At the conclusion of each application, the students' level of consciousness increased. This increase can be attributed, in part, to the activities implemented during the lessons.

**Discussion and Conclusion**

The activities in the developed HSRP education model take place at a crucial point. Unlike other universities' lectures on the same subject, this model covers not only theory but also practical applications, making it more compre-

Fig. 6 'Implementation 3 – Activity 6' Student-2 project example

TABLE IV ENVIRONMENT-HUMAN-SPACE EVALUATIONS OF STUDENTS TAKING HSRP EDUCATION MODEL IMPLEMENTATION 1-2-3

| Evaluations related to Environment-Space-Human Relations | | Implementation 1-2-3 | | | | |
|---|---|---|---|---|---|---|
| **No** | **Explanation** | **PRE-TEST** | | **FINAL TEST** | | **EVALUATION** |
| | | **%** | **Reply** | **%** | **Reply** | |
| 1 | I know the concept of "Environmental Psychology". | 9<br>22<br>52<br>17 | (1)<br>(2)<br>(3)<br>(4) | 65<br>35 | (1)<br>(2) | In the final test, all of the students demonstrated knowledge of the concept of "Environmental Psychology". |
| 2 | I can associate the concept of "Environmental Psychology" with the field of interior architecture. | 5<br>37<br>53<br>5 | (1)<br>(2)<br>(3)<br>(4) | 70<br>25<br>5 | (1)<br>(2)<br>(3) | In the final test, the rate of students associating the concept of "Environmental Psychology" with the field of interior architecture increased. |
| 3 | I know how the space-human relationship is shaped. | 20<br>45<br>30<br>5 | (1)<br>(2)<br>(3)<br>(4) | 68<br>32 | (1)<br>(2) | In the final test, all of the students were able to understand how the space-human relationship was shaped. |
| 4 | I can define the concept of "environment". | 24<br>54<br>14<br>8 | (1)<br>(2)<br>(3)<br>(4) | 62<br>36<br>2 | (1)<br>(2)<br>(3) | In the final test, the level of students' ability to define the concept of "Environment" increased. |
| 5 | Every interior is an environmental formation. | 45<br>30<br>25 | (1)<br>(2)<br>(3) | 64<br>36 | (1)<br>(2) | In the final test, all of the students were aware that every interior space is an environmental formation. |
| 6 | Human-environment relationship is effective in space design. | 50<br>25<br>25 | (1)<br>(2)<br>(3) | 77<br>23 | (1)<br>(2) | In the final test, all of the students are aware that human-environment relationship is effective in space design. |
| 7 | Having a strong understanding of the relationship between humans and the environment is essential for success in design studio courses. | 45<br>37<br>18 | (1)<br>(2)<br>(3) | 64<br>36 | (1)<br>(2) | In the final test, all of the students realised that having a good command of the human-environment relationship contributed to the design studio courses. |
| 8 | Having a strong understanding of the relationship between humans and the environment can positively impact communication skills after graduation. | 52<br>30<br>13<br>5 | (1)<br>(2)<br>(3)<br>(4) | 80<br>20 | (1)<br>(2) | In the final test, all of the students were aware that having a good command of human-environment relations has a positive effect on user communication after graduation. |
| 9 | I understand spatial perception well. | 5<br>25<br>48<br>22 | (1)<br>(2)<br>(3)<br>(4) | 48<br>48<br>4 | (1)<br>(2)<br>(3) | In the post-test, 96% of the students had knowledge about space perception. |
| 10 | I can define the concept of spatial identity. | 5<br>32<br>20<br>32<br>11 | (1)<br>(2)<br>(3)<br>(4)<br>(5) | 65<br>35 | (1)<br>(2) | In the final test, all of the students were able to define the concept of 'spatial identity'. |
| 11 | The user of a place cannot affect its identity. | 7<br>10<br>26<br>37<br>20 | (1)<br>(2)<br>(3)<br>(4)<br>(5) | 55<br>37<br>8 | (3)<br>(4)<br>(5) | In the final test, the students' level of awareness about 'the user of a place can affect the identity of the place' increased. Both option (3) and (4) are considered correct for this explanation. Because 'the user of a place affecting the identity of the place' may not be observed in every situation. |
| 12 | The identity of place influences the behaviour of its users. | 7<br>53<br>30<br>5<br>5 | (1)<br>(2)<br>(3)<br>(4)<br>(5) | 82<br>18 | (1)<br>(2) | In the final test, all of the students were aware that the identity of a place affects the behaviour of its users. |

hensible for students. The course activities are tailored to the university's geography. It is important to note that the suggested activities for this course may not be applicable to all universities. The course on human-space relationship and psychology should include activities related to the environmental characteristics of the relevant department at the university. This is because students' perception and experience of space are influenced by their relationship with their living environment (Junot, Paquet and Fenouillet, 2018). During the course, the theoretical topics were reinforced by discussing the relationship between the subject and the design examples known in the world with the students.

As mentioned in the introduction, the course was implemented not only in the Department

| Evaluations related to Environment-Space-Human Relations | | | | | Implementation 1-2-3 |
|---|---|---|---|---|---|
| **No** | **Explanation** | **PRE-TEST** | | **FINAL TEST** | |
| | | **%** | **Reply** | **%** | **Reply** | **EVALUATION** |
| 13 | I recognise the importance of spatial satisfaction in interior design. | 37<br>58<br>5 | (1)<br>(2)<br>(4) | 78<br>22 | (1)<br>(2) | In the final test, all of the students were aware of the importance of spatial satisfaction in interior architecture and their level of awareness about it increased. |
| 14 | I can define the concept of belonging to place. | 9<br>27<br>44<br>9<br>11 | (1)<br>(2)<br>(3)<br>(4)<br>(5) | 67<br>33 | (1)<br>(2) | In the final test, all of the students were able to define the concept of belonging to the place. |
| 15 | The person who is dissatisfied with the use of space may feel belonging to the same space. | 12<br>20<br>50<br>8<br>10 | (1)<br>(2)<br>(3)<br>(4)<br>(5) | 41<br>37<br>17<br>5 | (1)<br>(2)<br>(3)<br>(5) | In the final test, 95% of the students were aware that a person who is dissatisfied with the use of space can feel belonging to the same space. |
| 16 | The higher the satisfaction rate, the higher the belonging rate. | 38<br>34<br>28 | (1)<br>(2)<br>(3) | 60<br>40 | (1)<br>(2) | In the final test, all of the students realised that the higher the satisfaction rate, the higher the belonging rate. |
| 17 | I can explain the concept of privacy in spatial dimension. | 5<br>36<br>48<br>11 | (1)<br>(2)<br>(3)<br>(4) | 44<br>56 | (1)<br>(2) | In the final test, all of the students were able to explain the concept of privacy in spatial dimension. |
| 18 | Each person may have a different perception of privacy. | 40<br>28<br>32 | (1)<br>(2)<br>(3) | 32<br>33<br>35 | (1)<br>(2)<br>(3) | In the final test, the students' level of awareness that each person's perception of privacy is different increased. For this explanation, choices (1), (2) and (3) are considered correct. Because although the existence of privacy is certain for every person, privacy is not shaped in the same way for every person. |
| 19 | I recognise the general architectural structure of the place where I grew up and/or live. | 55<br>33<br>12 | (1)<br>(2)<br>(3) | 70<br>30 | (1)<br>(2) | In the final test, the students' level of awareness of the general architectural structure of the place where they grew up and/or lived increased. |
| 20 | I recognise how and to what extent the place where I live influences my cultural perception. | 27<br>50<br>23 | (1)<br>(2)<br>(3) | 60<br>40 | (1)<br>(2) | In the final test, the students' awareness of how and to what extent the place where they live affects their cultural perceptions increased. |
| 21 | Every person's perception of space is different. | 45<br>40<br>10<br>5 | (1)<br>(2)<br>(3)<br>(4) | 24<br>12<br>64 | (1)<br>(2)<br>(3) | In the final test, the students' level of awareness that each person's perception of space is different increased. Both option (2) and option (3) are considered correct for this explanation. Because every person's perception of space can be different, as well as similar or even the same situations. |
| 22 | Every person expects the same performance from the same type of venue, even if they come from different cultures. | 25<br>41<br>20<br>14 | (2)<br>(3)<br>(4)<br>(5) | 5<br>30<br>60<br>5 | (1)<br>(2)<br>(3)<br>(5) | In the final test, students' level of awareness increased for Statement 22. Because even if every person comes from different cultures, they can expect the same performance from the same type of space, but they may also have different expectations. Based on this, it is more accurate to answer 'Neither Agree nor Disagree (3)' for this statement. |

of Interior Architecture but also in the Department of Architecture, reflecting the interconnectedness of architectural disciplines. According to Göregenli (2010) and Bechtel and Churchman (2002), the fields of sociology, anthropology, architecture, urbanism, ecology, and all design fields are considered part of the human-space relationship and psychology. It is evident that undergraduate architecture students can comprehend the subject of the relationship between humans and space, as well as its psychological implications.

When architects prioritise concerns such as form, function, aesthetics, and economy, they may neglect human psychology to some extent, which can lead to disconnects in the interaction between humans and space. To eliminate this rupture, it is necessary to

Fig. 7 Pre-test and final test general values of HSRP Education Model Implementation 1-2-3



IMPLEMENTATION 1-2-3
PRE-TEST

IMPLEMENTATION 1-2-3
FINAL TEST
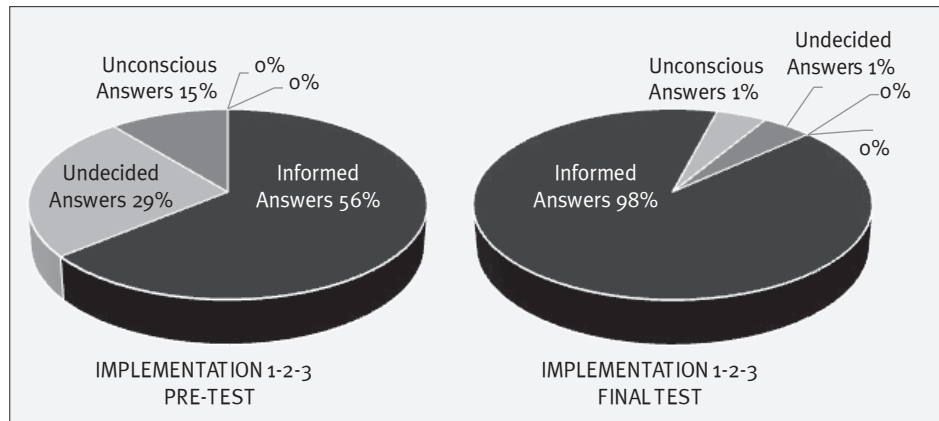
adopt and assimilate the human-space relationship and psychology, and use it to create adequate spaces. Understanding the critical role of human psychology in architecture is essential. Architects will inevitably adopt a psychological perspective that guides their designs, resulting in a built environment better suited to human needs (Mert, 2019). Regardless of their discipline, architects, interior designers, and landscape architects should consider the relationship between humans and space, as well as psychology. Mastering this field can meet the needs of targeted users and expand the scope of design, creating more comfortable spaces (Kopec, 2006).

The aim of this course, titled 'Human-Space Relationship and Psychology', is to establish the relationship between architecture, interior design, and psychology through interesting and engaging activities that encourage active participation from students. The course avoids simply loading information through the teaching method. In addition, a student-centered education program has been developed encouraging continuous learning and analysis. It is anticipated that students who have taken or will take the course on the same subject will contribute to the development of their skills by gaining knowledge through perception and experience, thus filling an important gap (Uzunoğlu and Özer, 2014).

The relationship between humans and space, as well as psychology, is a crucial issue for all architectural disciplines. During the study process, undergraduate students tend to focus more on the technical aspects of design, but it is important to remember that design is ultimately created to meet human needs. Although it is acknowledged that design should prioritize people, there are still architectural designs that fail to integrate with the user. In other words, designs that do not meet the user's needs and expectations at the time of their creation may arise. To avoid this situation, it is important to have a good understanding of the relationship between humans and space, as well as psychology. The quantitative data in this study clearly shows that designer candidates' level of awareness increases with the perception and comprehension of the human-space relationship and psychology education model.

Therefore, it is necessary for faculties of architecture in universities to make courses on human-environment relations and psychology mandatory in undergraduate education. The study is based on the fact that every architectural discipline is shaped on the basis of design. Course contents are not limited to theoretical subjects; they are made more efficient for students by being supported with design and analysis examples. In the implemented education model, theoretical topics remain the same, but activities can be rearranged and improved according to time and geography. It may be necessary to change the content of the activities while keeping their structure the same for the program to be more effective and useful. Based on these considerations, students who take the same course with the same education model will produce designs that can be fully integrated with the user and sustainable in the social field.

## BIBLIOGRAPHY

1. ADIGÜZEL, D. (2011) *Türkiye'deki İç Mimarlık Eğitiminde Çevresel Yaklaşım.* Published master's thesis, Kadir Has University, İstanbul [online]. Available at: https://tez.yok.gov.tr/UlusalTezMerkezi/tezDetay.jsp?id=3fV48ibHbTAr-jw99GArYw&no=EXQWsjd-bMBfKqZ-kjXK_QQ [Accessed: 22 April 2023].

2. AYGENÇ, B. (2020) *Kullanıcı Açısından Mekân Aidiyeti ve Yaşam Çevresinin Psikolojik Etkilerinin Samanbahçe Konutları Örneğinde İncelenmesi.* Published master's thesis, Near East University, Nicosia.

3. AYGENÇ, B.; ÖZBURAK, Ç. and UZUNOĞLU, S.S. (2020) Investigation of Place Attachment and Sense of Belonging from the Perspective of the Residents – Samanbahçe Social Residences as Case Study. *Amazonia Investiga.* 9(32), pp. 91-107, https://doi.org/10.34069/AI/2020.32.08.10

4. BECHTEL, R. and CHURCHMAN, A. (2002) *Handbook of enviromental psychology.* New York: Jhon Wiley and Sons Publishing.

5. BELL, P.; FISHER, A. and BAUM, T.G. (1996) *Environmental psychology.* Fort Worth: Hercourtbreace College Pub.

6. BONAIUTO, M. and BONNES, M. (2000) Social-psychological approaches in environment-behavior studies. *Theoretical perspectives in environment-behavior research* (67-78). Springer, Boston, MA. https://doi.org/10.1007/978-1-4615-4701-3_7

7. BOZDAYI, A.M. (2004) İç mekân ve insan. Ankara: AJANSMAT Printing Press.

8. DEVLIN, A.S. (2018) *Environmental Psychology and Human Well-being: Effects of Built and Natural Settings.* Cambridge: Academic Press. https://doi.org/10.1016/B978-0-12-811481-0.00001-9

9. DRAPER, J. (2000) *The architect: chapters in the history of the profession – The ecole des beaux-arts and the architectural profession in the United States: the case of John Galen Howard.* Los Angeles: University of California Press.

10. ERIŞ, E. and AĞAN, M. (2020) Türkiye'deki İç Mimarlık Eğitim Programlarının Karşılaştırılmalı Analizi Mesleki Kimlik Karmaşasının İncelenmesi. *Journal of Architecture and Life,* 5(2), pp. 423-439 [online]. Available at: https://dergipark.org.tr/tr/pub/my/issue/57609/794120 [Accessed: 27 November 2023]. https://doi.org/10.26835/my.794120

11. GIFFORD, R. (2007) *Environmental psychology: principles and practice.* Colville, WA: Optimal Books.

12. GÖKA, Ş. (2001) İnsan ve mekân. İstanbul: Pınar Publications.

13. GÖREGENLI, M. (2010) *Çevre psikolojisi (insan – mekân ilişkileri).* İstanbul: Bilgi University Publishing.

14. JUNOT, A.; PAQUET, Y. and FENOUILLET, F. (2018) Place attachment influence on human well-being and general pro-environmental behaviors. *Journal of Theoretical Social Psychology.* 2(2), pp. 49-57. https://doi.org/10.1002/jts5.18

15. KOPEC, D. (2006) *Environmental Psychology for Design.* New York: Fairchild Books.

16. LYNCH, K. (2010) *Kent İmgesi.* İstanbul: Turkiye Is Bankası Publishing.

17. MERT, S. (2019) *Environmental psychology discourse in architecture: Current status in turkish architecture education.* Published master's thesis, Middle East Technical University, Ankara.

18. ROTH, L.M. (2007) *Understanding architecture: its elements, history and meaning*, 2nd Edition. Cambridge: Westview Press.

19. SADRI, H. and ZEYBEKOĞLU S.S. (2013) Özgürleştirici mimarlık eğitimi. *Journal of Critical Pedagogy,* 28, pp. 60-66.

20. SARAF, M. (2013) Türkiye'de iç mimarlık eğitiminde aydınlatmanın yeri ve önemi. İstanbul: Okan University [online]. Available at: http://www.emo.org.tr/ekler/ca89a85612b8e45_ek.pdf [Accessed: 19 October 2020].

21. SEVINÇ, Z.; ÇAKIR, O. and İLAL, M.E. (2015) Türkiye'deki iç mimarlık eğitiminde yapı fiziği dersleri. *Interior Architecture Education 3rd National Congress.* Congress book, pp. 1-14.

22. SOLAK, G.S. (2017) Mekân – kimlik etkileşimi: Kavramsal ve kuramsal bir bakış. *MANAS Journal of Social Studies,* 6(1), pp. 13-37, ISSN: 1624-7215.

23. UZUNOĞLU, S.S. and ÖZER, H. (2014) Mimarlık eğitiminde mimari psikoloji formasyonunun geliştirilmesi için bir model. *Megaron,* 9(2), pp. 143-165 [online]. Available at: https://jag.journalagent.com/megaron/pdfs/MEGARON-39974-ARTICLE_%28THESIS%29-UZUNOGLU.pdf [Accessed: 2 February 2020].

24. WILTON-ELY, J. (2000) *The architect: chapters in the history of the profession – The rise of the professional architect in England.* Los Angeles: University of California Press.

## AUTHORS' BIOGRAPHIES AND CONTRIBUTIONS

**BEREN AYGENÇ** received her B.Int.Arch. in Interior Architecture and Environmental Design from TOBB ETU (2016). Earned her M.Int.Arch. degree in Interior Architecture from the NEU (2020) and she is currently a Ph.D. student. The major research interests include human-space relationships and environmental psychology.

**ÇIMEN ÖZBURAK** received her B.Arch. degree in Architecture from NEU (2003). She completed her master's (2014) and Ph.D. degrees (2018) in Architecture at the NEU. Currently, she works as an Assist. Prof. (2019) at the NEU. The major study field is sustainable spaces and architecture for preschool pupils.