

## Atelier experiences in interior architecture education: Zero waste approaches

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### Suggested Citation:

Köse Doğan, R. (2022). Atelier experiences in interior architecture education: Zero waste approaches. *New Trends and Issues Proceedings on Humanities and Social Sciences*. [Online]. 9(1) pp 68-75.  
<https://doi.org/10.18844/prosoc.v9i1.7096>

Received from February 09, 2022; revised from March 10, 2022; accepted from April 12, 2022.

Selection and peer-review under the responsibility of Assoc.Prof.Dr. Jesus Garcia Laborda, University of Alcalá, Spain.

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### Abstract

Workshops, seminars, ateliers, and charrettes, which are vocational courses and extracurricular activities taken outside of the studio courses, support studio education to a great extent. The "learning by doing" model gains significance in 21st-century interior architecture education. In this context, the application model of two workshops/ateliers held at different times within the scope of the study will be reviewed. The first of these consists of the Zero Waste Approach in Design Education Training Workshop-1, which was held face-to-face and organized by the Hacettepe University Faculty of Fine Arts, Department of Interior Architecture and Environmental Design in 2019, and the second, the Zero Waste Approach in Design Education Training Workshop-2, held online in 2021. From the study, participation in workshops and ateliers in interior architecture education boosts students' awareness, supports group work, increases synergy and motivation, and strengthens their design skills. The cooperation of institutions, on the other hand, expands the interaction and provides important contributions to interior architecture education.

**Keywords:** Atelier; Interior Architecture; Learning by Doing; Workshop; Zero Waste.

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## 1. Introduction

The main setup of Interior Architecture education takes place via studio lessons. Workshops, seminars, ateliers, and charrettes, which are vocational courses and extracurricular activities taken outside of the studio courses, support the studio education to a great extent. The project studio forms the basis of vocational training. In-studio education, based on problem-solving and discovery, it is essential to create a constant experimental environment with the participation of all stakeholders and to integrate the knowledge and skills acquired from project studios and other courses in the stages of reaching, transforming knowledge, and transferring data to design (Cordan and Görgül, Çinçik, Numan, 2012). According to Schön, what privatizes and privileges the education of architecture and interior design is the learning process in the studio (Schön, 1985).

Owing to the distinctive nature of design workshops, it is vital to create an environment that enables the free expression and sharing of ideas through the information processing process that can be defined by organizational and social processes for both students and practitioners (Coyne, 1994). Workshops and classrooms employed in educational institutions managed with the discipline of design are places of making, disrupting, and experiencing, which allow students to show their creativity in today's design education (Okuyucu & Çoban, 2019). It should also motivate the subjectivation of the process of addressing the design problem as well as being an environment where concepts can be resolved and made personal in their conceptual world (Yıldırım & Güvenç, 1995).

### 1.1. Purpose of study

The "learning by doing" model gains significance in 21st-century interior architecture education. In this context, the application model of two workshops/ateliers held at different times within the scope of the study will be reviewed. The first of these consists of the Zero Waste Approach in Design Education Training Workshop-1, which was held face-to-face and organized by the Hacettepe University Faculty of Fine Arts, Department of Interior Architecture and Environmental Design in 2019, and the second, the Zero Waste Approach in Design Education Training Workshop-2, held online in 2021.

The workshops are organized by Hacettepe University with the contributions of the Ministry of Environment and Urbanization. Within the scope of the workshop/atelier, atelier coordinators are academicians working in institutions giving interior architecture education, and workshop participants are from interior architecture students studying at different universities.

## 2. Methods

This study reports the findings from a study that was conducted by Hacettepe University with the contributions of the Ministry of Environment and Urbanization. The study covered the years 2019-2021. It was in two sessions. The application model of two workshops/ateliers held at different times within the scope of the study will be reviewed. Results from these two workshops are reported in the results section.

## 3. Results

### 3.1. Zero Waste Approach in Design Education Training Workshop-1 Process

In the developing and changing world and Turkey, environmental problems emerge due to many reasons such as the decrease in natural resources and biological diversity, the deterioration of the ecosystem, and the increase in consumption. These problems result in waste and thus waste management becomes a substantial problem. Different solutions are offered for the management of paper, plastic, metal, glass, wood, and composite packaging wastes defined under the title of packaging waste. The conversion rate in this waste group is high and efficient (Köse & Gökçe, 2021).

The more economically we use our natural resources, the fewer future generations will suffer from resource shortages and future generations will have the opportunity to benefit from natural resources (Özden, 2014).

As part of the Zero Waste Approach in Design Education Training Workshop-1 organized by Hacettepe University Faculty of Fine Arts, Department of Interior Architecture and Environmental Design in 2019, in the workshop titled "Spatial and Artistic Approaches from Waste" conducted by Assoc. Dr. Rabia Köse Doğan, spatial and artistic products were designed and produced from waste materials with 26 participants.

Within the scope of the workshop, two different models have been developed for the recycling of wastes such as paper, pasteboard, and cardboard. The first of these creates a shelter model for animals such as cats, dogs, and birds, our friends in nature. First of all, the workshop group was informed about the study subjects and after the sample studies were shared, individual or group design proposals were asked originally. Design suggestions were gathered under poster studies.

In the first stage of the workshop, examples consisting of ecologically designed structures, spaces, equipment, and artistic works produced from waste materials such as paper and cardboard were presented within the scope of "Spatial Approach from Waste" in the first stage. The structures and spaces made of paper tubes produced by the Japanese architect Shigeru Ban as a solution to the need for emergency shelter after the Kobe Earthquake were explained with examples and constructions (Garcia, 2001). As a design problem, it was requested to materialize a shelter model for stray animals by adhering to paper tubes, materials, and construction techniques. The shelter models designed by the workshop coordinators were shown before the workshop. Among the developed models, the birdhouse was requested to be produced as a prototype from paper tubes.

At the end of the first phase of the workshop, 6 different shelter model solutions were built for cats, dogs, and birds. Project solutions consisting of front view, side view, plan, and perspectives were placed in poster designs. For the prototype birdhouse, the paper tubes were cut to suitable lengths, holes were drilled into them, and the ceiling and floors were covered with cardboard. Wooden sticks were placed in the section where the holes were located. Plants collected from the campus area were added and combined. As a prototype, the birdhouse model was produced in a workshop environment (Köse, 2019).

### **Figure 1**

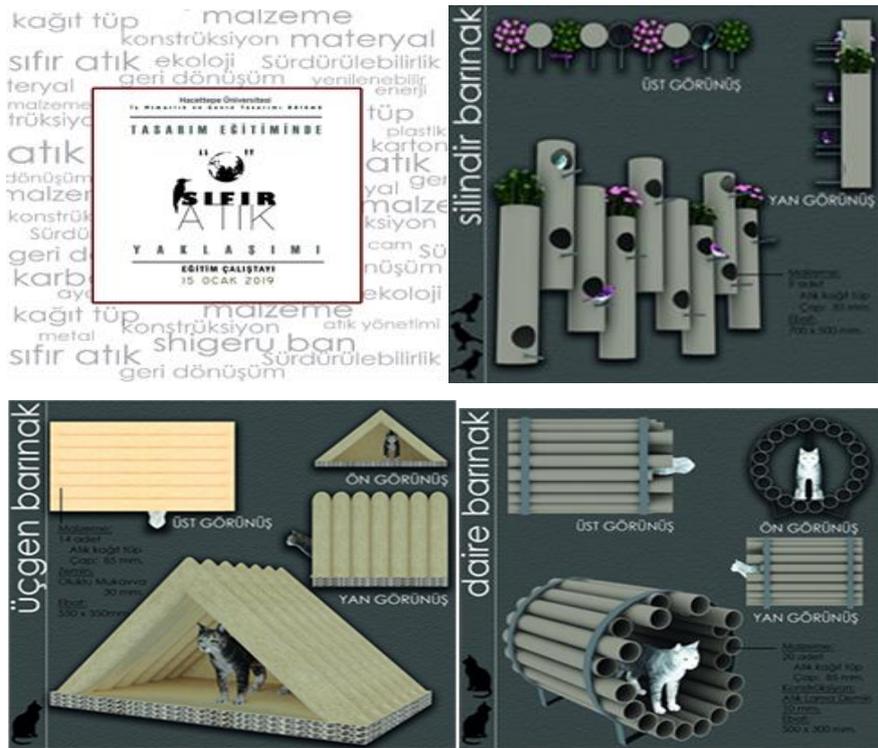
#### *Stages of the Workshop*

##### **Stage 1: Creating a Shelter Model (Spatial Design)**

- a. Transferring Theoretical Information (Presentation Process)
- b. Giving the Design Problem (Preparation of Materials)
- c. Problem Solving (Design Process)
- d. End Product (Exhibition)

**Figure 2**

*Shelter Models with Zero Waste Approach*



As for the second stage, the workshop group was asked to produce wall panels from waste material within the scope of "Artistic Approach from Waste". First of all, after the waste newsprint and cardboards were provided, information was given about the content of the study. Ruler, square, pencil, utility knife, scissors, cutting mat, adhesive, spray paint, and mold templates were used as auxiliary materials. In the beginning, 4 pieces of waste cardboard were cut in 50x50 cm dimensions. Edge stripes were colored with red and black spray paints. Patterns were drawn and colored with mold stencils on waste newspaper papers cut in 40x40 cm dimensions. Newspaper papers were pasted on cardboard and turned into wall panels. The process of obtaining an artistic work from paper waste was produced in the workshop environment, as a result of group work with the necessary materials. At the end of the work, double-sided tapes were placed on the back surface of the wall panels and they were prepared for the exhibition. As a result, wall panels consisting of waste newspaper papers, cardboard, and paints were produced in the workshop environment (Köse, 2019).

**Figure 3**

*Stages of the Workshop*

**Stage 2: Creating a Wall Panel Model (Artistic Design)**

- a. Giving the Design Problem (Preparation Process)
- b. Solving the Problem (Implementation Process)
- c. End Product (Exhibition)

**Figure 4**

*Wall Panels with Zero Waste Approach*



As a result of the work conducted in the ateliers of Hacettepe University Faculty of Fine Arts, Department of Interior Architecture and Environmental Design, an exhibition was opened in the foyer area of the faculty and the end products of the workshop were exhibited. The results of the workshop were at a level that would contribute to students, lecturers and visitors. The recycling of waste materials, being a part of design education, and their transformation into spatial and artistic products will set an example for academics and designers. At the end of the workshop, it was noticed that group work increased participation and sharing. In addition, the design and production process were assessed together.

### **3.2. Zero Waste Approach in Design Education Training Workshop-2 Process**

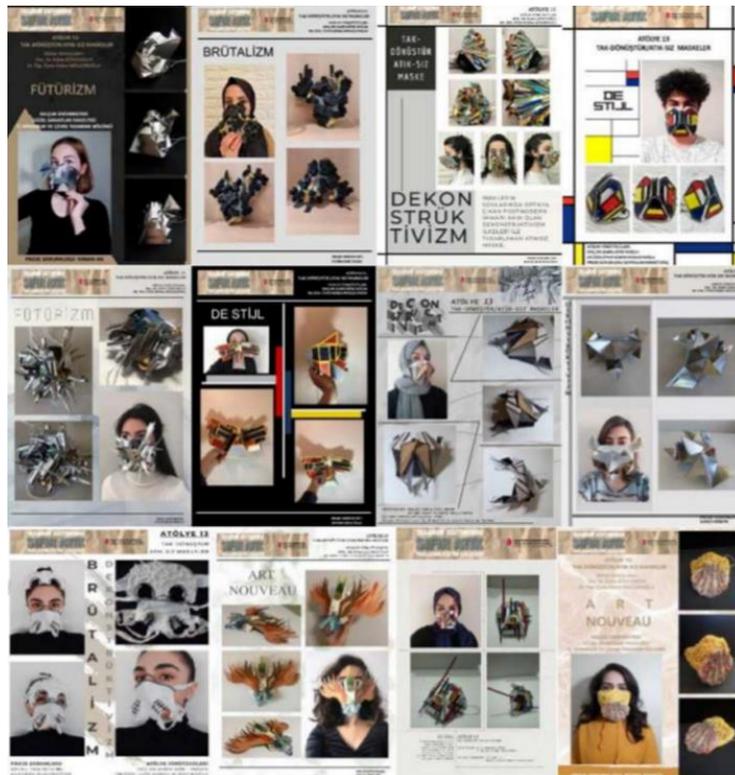
Two different workshops were conducted within the scope of Zero Waste Approach in Design Education Training Workshop-2, organized by Hacettepe University Faculty of Fine Arts, Department of Interior Architecture and Environmental Design in 2021 and held online. The topic of the first workshop, carried out by Assoc. Prof. Rabia Köse Doğan and Faculty member Dr. Kübra Müezzinoğlu with 11 participants, was determined as "Plug Transform/Waste-Free Masks". Waste masks cause a critical problem with the increasing use of masks in the world and Turkey with the pandemic. Within the scope of the workshop, this issue was tried to be focused on with an artistic approach. In the same workshop, the topic of the second workshop, conducted by Assoc. Prof. Rabia Köse Doğan and Research Assistant Gökçe Onur with 14 participants, was determined as "From Waste to Art: Urban Icons". In this context, building silhouettes, having a noteworthy place in the literature and are iconic symbols of cities, from wastes such as newspapers, magazines, and brochures, which constitute packaging waste, have been transformed into artistic wall panels with the collage technique. As a result of the workshop, the works were exhibited online.

In the workshop "Plug Transform/Waste-Free Masks", held to bring an artistic perspective and raise awareness with a zero-waste approach to masks, which are among the wastes of the pandemic period; the learning-by-doing method, a learning system based on experience and discovery, and which envisages being intertwined with all the possibilities of life, was used. First, a work schedule was determined for the workshop. Parameters related to which need the workshop will meet, how to use the designed masks, and how to ensure interaction between the user and the work have been determined. The workshop is planned for practice. 1/4 of the workshop is devoted to knowledge sharing and 3/4 to practical applications. The workshop, which was planned in line with the determined work schedule, was built on four basic stages.

In the first stage of the workshop, "Defining the Design Problem", the workshop participants were shown a video presentation with mask images in different styles and forms, without giving any theoretical information about the subject. In the second stage, "Theoretical Information Transfer on the Subject" was made by the coordinators. Within the scope of the study, information about the art movements of "Art Nouveau, De Stijl, Brutalism, Futurism, and Deconstructivism" was given. A presentation consisting of visuals of examples in the field of structure and fashion, including the characteristics of art movements, was shared. In the third stage, participants were asked to choose one of the art movements described within the scope of "Design Proposal Development and Improvement", and mask design was started with the selected art movement. Mask templates created digitally by the workshop coordinators were given to the participants at this stage. The templates were designed according to the art movements selected by the participants, by taking optional printouts or supporting them with on-screen drawing programs. In the final stage of the workshop, "Conclusions and Outputs"; mask designs formed as a result of different forms, colors, textures, and technical pursuits, Waste materials such as waste packaging papers, magazine pages, colored waste background cardboard, newspaper clippings, paper bags, string, rubber bands, buttons, foils, straws, and pieces of fabric were transformed into waste-free masks with artistic content (Köse & Müezzinoğlu, 2021).

**Figure 5**

*Waste-free Mask Studies with Zero Waste Approach*



The workshop was completed efficiently with the intense dedication, enthusiasm, and efforts of the participants. In the workshop "Plug Transform/Waste-Free Masks", formal outputs were obtained but also brainstorming, a freedom area in reaching the content of the outputs was used. At the end of the workshop, the participants watched the video presentation, which included the workshop outputs and the images of the reinterpreted masks.

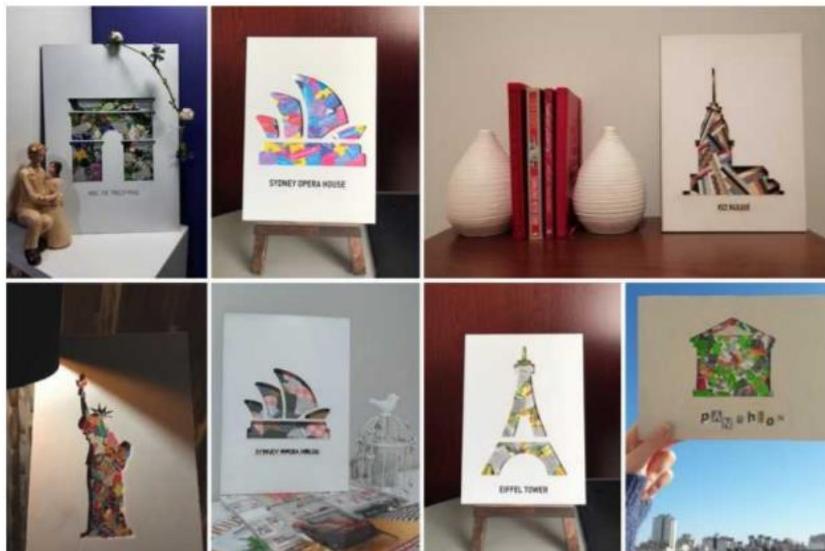
In the second workshop "From Waste to Art: Urban Icons", held as part of the Zero Waste Approach in Design Education Training Workshop-2, the participants were asked to design wall panels by

transforming the buildings that have become symbols of different countries into city icons from paper waste.

Burning or throwing away paper waste causes environmental pollution. The aim of the workshop, which was built from this point of view, is to combine colored papers such as newspapers, magazines, brochures, and especially model wastes of design students, defined under the title of packaging waste, into artistic wall panels by combining building silhouettes, having an important place in the literature and are iconic symbols of cities, with collage technique. The method of the study was designed to support the aim of ensuring the up-cycling of paper wastes that have lost their function, by combining them with creativity. The materials required for the study were announced to the participants in advance. The design problem was determined by giving brief information to the participants about the need for the reuse of paper waste. After defining the problem, in the second stage, a video about the iconic structures of the cities was shown and the usage of different collage techniques was explained through examples. In the third stage, the implementation process started. A4 size white waste paper materials were preferred for the working area. The stylized city icons were turned into wall panels by stylizing the city icons they chose or by using different collage techniques by emptying a surface of the plain white material with a decoupage technique using ready-made templates. The resulting wall panels were exhibited online (Köse & Gökçe, 2021).

**Figure 6**

*Urban Icons Studies with Zero Waste Approach*



In the workshop, held online under the leadership of Hacettepe University Faculty of Fine Arts, Department of Interior Architecture and Environmental Design, the workshops "From Waste to Art: Urban Icons" were followed throughout the process and the final product was requested to be photographed in decorative areas. At the end of the one-day workshop, documents were presented to the participants in a digital environment.

#### **4. Conclusion**

At the end of the face-to-face and online studies within the scope of the "Zero Waste Approach in Design Education Training Workshops" organized by Hacettepe University Faculty of Fine Arts, Interior Architecture and Environmental Design Department, the workshop processes that support the project studios, where the "learning by doing" model gains importance in 21st-century design education, the outputs are listed as follows:

1. Interior architecture students grew their professional knowledge and experience through the "Learning by Doing Model" face-to-face and online with the instructors in the workshop environment.
2. The participants, who encountered the design problem, gained experience in problem-solving by adhering to certain stages in a short time.
3. The learning of concepts such as sustainability, recycling, and upcycling and their widespread use in the field of design increase the level of consciousness of future generations.
4. Awareness was raised by the workshop coordinators and participants about "Zero Waste" and the significance of the subject was emphasized. Different usage areas of materials known as waste have been created.
5. Collaboration between different institutions and universities has raised the motivation for interdisciplinary design and created synergy. The end products were exhibited and reached a wide audience.

In conclusion, participation in workshops and ateliers in interior architecture education increases the awareness of the participants, supports group work, creates synergy and motivation, and strengthens their design skills. The cooperation of institutions augments the interaction of the instructors and makes significant contributions to interior architecture education.

### Acknowledgement

I would like to thank Research Assistants Zeynel Dünder, İnci Pürlüsoy, and Fatih Mazlum for their contributions during the Zero Waste Approach in Design Education Training Workshop-1 process.

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