Elective Courses as a Dialogic Environment: Sustainable Design in Interior Architecture Course



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Abstract: This study is about the conceptual form, structure, process and outcomes of the elective course of Sustainable Design in Interior Architecture prepared based on the dialogism concept of Mikhail Bakhtin. Dialogical education based on Bakhtin's concept of dialogism is a set of relationships and interactions based on the principles of collective, reciprocal, supportive, cumulative and purposeful. In this context, the dialogic environment is offered as a course structure recommendation. Four dialogic environments comprised of the first opening current subjects to discussion, the second allowing interdisciplinary inquiries, the third establishing connection with the design studio and the fourth transforming conceptual knowledge into a design product are developed at the course. In the first dialogic environment, the historical background of the sustainable design, and the studies, projects and researches in this field being the current subjects of the professional environment are shared with the students with a critical approach. The second dialogic environment is a coffee story application in the form of a disciplinary discussion. The critical approach application in the context of environmentally sensitive design aims for dialogic interaction with the design studio. The transformation of the conceptual knowledge into a design product has been achieved with an interior architecture in a slow city. The dialogic environment is analyzed with student projects and a survey given to the students. The data collected with the survey are evaluated based on dialogism points and course structure. In conclusion, the dialogic environment and unconventional applications have raised awareness among students regarding sustainability and directed them to critical thinking. However, the formation of the dialogic environment with three applications has made it difficult for the students to focus on the subject. Therefore, the dialogic environment for the elective courses should be supported with fewer applications or various questions under a single application.

Keywords: Interior architecture education, elective course, creativity, dialogic, sustainable design

Diyaloji Ortamı Olarak Seçmeli Dersler: İç Mimarlıkta Sürdürülebilir Tasarım Dersi

Özet: Çalışmada, Mikhail Bakhtin'in diyaloji kavramına temellenerek kurgulanan İç Mimarlıkta Sürdürülebilir Tasarım seçmeli dersinin kavramsal yapısı, strüktürü, süreci ve çıktıları ele alınmaktadır. Bakhtin'in diyoloji düşüncesine temellenen diyolojik eğitim; ortaklaşa, karşılıklı, destekleyici, birikimli ve amaçlı ilkelerine dayanan ilişkiler ve etkileşimler bütünüdür. Bu bağlamda diyaloji ortamı, ders strüktürü önerisi olarak ortaya konmaktadır. Derste, meslek ortamının güncel konularını tartışmaya açan, disiplinlerarası sorgulamalara izin veren, tasarım stüdyosu ile ilişki kuran, kavramsal bilgiyi tasarım ürününe dönüştüren dört diyaloji ortamı geliştirilmiştir. Diyaloji ortamının ilkine karşılık, meslek ortamının güncel konusu olan sürdürülebilir tasarımın tarihsel arka planı, bu konudaki çalışmalar, projeler ve araştırmalar eleştirel yaklaşımla öğrencilere aktarılmıştır. İkinci diyaloji ortamı, disiplinlerarası

sorgulamalara karşılık gelen bir kahve hikâyesi uygulamasıdır. Çevreye duyarlı tasarım bağlamında eleştirel sorgulama uygulaması ile tasarım stüdyosu ile diyalojik etkileşime girilmesi hedeflenerek, üçüncü diyalojik ilişki kurulmuştur. Dördüncü diyoloji ilişkisi olan kavramsal bilginin tasarım ürünü dönüştürülmesi, sakin şehirde iç mimar projesi ile sağlanmıştır. Bu dört diyaloji ortamı; öğrenci çalışmaları ve öğrencilere yapılan anket ile analiz edilerek değerlendirilmiştir. Anketten elde edilen verilen, diyaloji noktaları ve dersin strüktürüne bağlı olarak ele alınmıştır. Sonuçta, diyaloji ortamının ve alışılmışın dışında kurgulanan uygulamaların öğrencilere sürdürülebilirlik konusunda farkındalık kazandırdığı ve eleştirel düşünmeye yönlendirdiği görülmüştür. Ancak diyaloji ortamının üç uygulama ile şekillenmesi, öğrencilerin, konuya odaklanmasını zorlaştırmıştır. Bu nedenle seçmeli dersler için önerilen diyaloji ortamının, daha az sayıda uygulama veya tek uygulama altında çeşitlenen sorular ile desteklenmesi önerilmektedir.

Anahtar Kelimeler: İç mimarlık eğitimi, seçmeli ders, yaratıcılık, diyaloji, sürdürülebilir tasarım

1. INTRODUCTION

In the interior architecture education like all design-based disciplines, the design studio should allow development and change. The mandatory courses should provide theoretical and practical knowledge and a number of elective courses focusing on current subjects should be made available. The design studios form the core of the interior architecture education and the information needed for design studios is supported with mandatory and elective courses. Therefore, any information obtained, and any application performed in mandatory and elective courses direct the project studio and are of great importance. Özğenel asks the following question about this conventional approach in design education:

The generation, evaluation and sharing of the information regarding design can be formed in the context of a network exceeding the studio limits. Can this transform the conventional education model, where the design studio/workshop is the 'focus' and the remaining courses are the 'service', into a network environment where all components of the program can be managed in a way to develop the information design process, to integrate different external actors into the process and to allow their contribution? [1]. As stated in the above citation from Özğenel, the education model should go beyond the approach where the courses other than the studios are considered as service [1]. Moreover, the fast developing and shaping nature of the current era requires questioning how to keep up with the current developments in the context of education. In this context, the 4th İstanbul Design Biennial has focused on the "School of Schools" theme under the curatorship of Jan Boelen and aimed for triggering a discussion regarding design education. Boelen states that the design education has not changed a lot even though it has been 99 years since Bauhaus while the world's order has changed remarkably. He claims that the approved design education models used repeatedly do not keep up with the times and do not provide the answers we need [2].

The elective course of Sustainable Design in Interior Architecture developed for ensuring the elective courses to go beyond being service courses and keeping up with the times is opened for discussion in the above explained interior architecture education. The course focuses on sustainability, considered as a main heading where environmental problems and efforts to find solutions are discussed. The course of Sustainable Design in Interior Architecture was taught by the Department of Interior Architecture and Environment Design as a shared elective course at the undergraduate program at the Faculty of Engineering of İstanbul Kültür University (İKÜ) during the term of Autumn 2016-17. This course is available to departments of architecture, interior architecture and environmental design since it is a shared elective course. Elective courses can be taken by all students excluding the first-year students.

The course structure is formed on two main problems. The first is what an elective course is and how it should be. The second is how the students learn creative thinking at an elective course. It is planned to find

the answers to these problems with the dialogism concept of Bakhtin. Dialogic comes from dialogue in terms of etymology. However, it is a multi-dimensional and complex network as compared to the dialogue [3]. That is because one of its main components is interaction and the idea of one subject's becoming closer to another subject through its own subjectivity. Dialogic teaching is ensured by new dialogic areas opened by different perspectives for the co-generation of information. In this context, interactions and relationships are the main common point of dialogic teaching [4, 5].

First, the place and structure of elective courses in interior architecture education are examined. Then, the structure and process developed based on dialogism concept and supporting creativity are presented for the course of Sustainable Design in Interior Architecture. The course is shaped by four creative dialogic environments comprised of the first opening current subjects to discussion, the second allowing interdisciplinary discussions, the third establishing connection with the design studio and the fourth transforming conceptual information into a design product. This structure is presented with student applications¹ and the dialogic environment is analyzed and evaluated with a survey given to the students.

2. ELECTIVE COURSES IN INTERIOR ARCHITECTURE EDUCATION

The interior architecture education in Turkey first started in 1925 at Interior Decoration Workshop at Sanayi-i Nefise Mektebi Ahalisi (İstanbul Academy of Fine Arts which is today Mimar Sinan Fine Arts University) [6]. Today this education is provided at departments of interior architecture and interior architecture and environment design of different faculties at around sixty universities. This creates a pluralist environment and ensures plurivocality at the same level in interior architecture education. However, this multi-layered structure should unite on a common ground on some axes in order to support associations at both international and national platforms. For this purpose, the CIDA-Council of Interior Design Accreditation accredits education institutions and programs while the ECIA-European Council of Interior Architects accredits professionals and professional chambers [7]. Turkey has initiated Bologna process in order to ensure unity at national and international level and the high education institutions have undergone a new restructuring for this purpose.

Bologna process is a system developed to meet on a common ground regarding high education and academic matters and to create a harmonized higher education structure in Europe. Turkey joined this system in 2001 and the universities have restructured their education programs as part of Bologna process [8]. The departments of interior architecture have been affected by this process and have undergone a new reformation process. While the design studios continue to be the focus of education, 25% of the education is comprised of elective courses. Elective courses are included in education programs with different contents and scope under different names such as elective university course, elective department course, elective faculty course, elective major area course, and elective external area course [6].

As the quantitative value of the elective courses in the interior architecture education programs increases, it is of great importance that their quality should increase at the same level. The elective courses should go beyond the systems where only theoretical information is provided to the students and exams are held to evaluate whether the students have learned the information, they should learn according to the set education goals. It is of great importance that the contents of the elective courses should be open to change and development with innovative and creative perspectives.

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¹Projects by different students are selected as samples for each application and the projects of the students who attend the class and complete their projects are used in the study.

The students are free to select among elective courses based on their areas of interest and desires. This offers the students to decide on their areas of expertise and provide in-depth information about the related subjects. However, in order to achieve this, the course contents should be in parallel to the today's education approaches and should focus beyond the unilateral transfer of information. The course structure can be enriched with different methods such as visits, research reports, design processes and production applications instead of classical methods. Moreover, since it is possible to open elective courses on current subjects, they have the potential to become a junction point between the project courses and today's professional environment. As part of this study, this junction point is planned to be ensured with the dialogic environment to be established at the course and this will also support creativity.

3. ELECTIVE COURSE: CREATIVE DIALOGIC ENVIRONMENT

According to dialogism concept developed by Mikhail Bakhtin, the truth does not emerge inside the brain of a single person and cannot be found there; it will only emerge between the people looking for the truth together and their dialogic interactions process [9]. Even though the dialogism concept is developed in its essence for the linguistics based on words, it is an interaction between plural meanings and thus, considers the subjects to be plural. Dialogism is not the speaking of two subjects, but is plurivocality, in other words, the speaking of several subjects. Contexts and interactions in dialogic thinking are continuous and these interactions include counter existences and struggles [10].

Dialogic teaching is based on five principles as collective, reciprocal, supportive, cumulative and purposeful, which aim for collaboration between the teacher and students. The principle of collective means that the teacher and students apply the education strategies together. The principle of reciprocal means that the teacher and students share ideas and develop alternative viewpoints. The principle of supportive means that the students help each other to generate information in a learning environment where ideas are articulated freely. The principle of cumulative means that the teacher and the students build on their own ideas and connect them into coherent lines of thinking. The principle of purposeful means that the teacher directs the communication based on the purpose of the teaching [4, 5]. The dialogic model in education means interaction, communication, partnerships, associations, connections and relations. The education model where the dialogic perspective is adopted allows creative thinking.

As stated by Melikoğlu Eke, the creative thinking process is dynamic and variable. Being creative is a critical, argumentative thinking process which requires inquiries [11]. The essential elements of creativity are critical thinking, multi-directional thinking, creating different solutions to the same problem and being interdisciplinary. It is also a common belief that the creativity is a learnable phenomenon and can be improved through education [12]. In this context, creativity and creative thinking are a milestone with several components and are equal to experience in design education. Educational activities with designed ways of learning and processes ensure "self-expression" and "self-fulfillment" which develop and support the creativity of the students [11]. Creativity and dialogic teaching model intercept on the same level in this context and have the potential to create a system supporting each other.

The course of Sustainable Design in Interior Architecture is formed based on the dialogic teaching model as a voyage of creative discovery. The dialogic environment established at the elective course aims to support the creativity of the students. It can be ensured with the communication based on interaction between the teacher and the students as well as the associations and relations to be established. The subjects and problems discussed at the course have a dialogic relation with each other.

A creative dialogic model with the following features is recommended:

• Discusses current matters of the professional environment,

- Allows interdisciplinary inquiries,
- Establishes connection with the design studio,
- Transforms conceptual information into a design product

The "sustainability" is the main concept of the course as the current subject of the professional environment, being the first of the above dialogic relation points encouraging creative thinking. The remaining three dialogism points are shaped by three applications as can be seen in Figure 1. During the first seven weeks of the course, the historical background of the sustainable design, and the studies, projects and researches in this field are shared with the students with a critical approach. During the last seven weeks of the course, a technical trip is organized and the interior architecture application in a slow city being the fourth dialogic environment is launched.

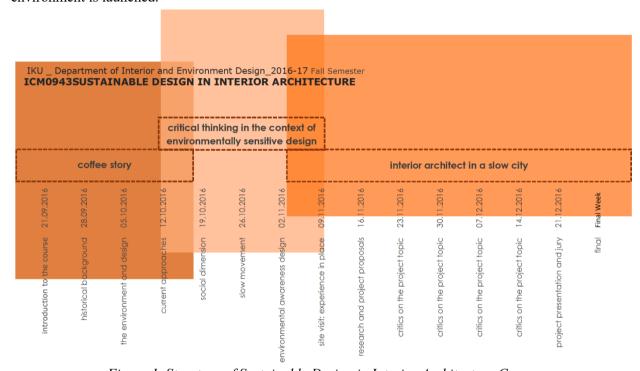


Figure 1. Structure of Sustainable Design in Interior Architecture Course

3.1. Dialogism I: Discussing current matters of the professional environment "Sustainability"

Environmental pollution, unpredictable environmental destruction by the capital, global climate crisis and fast consumption of natural resources are the top problems requiring urgent precautions. Solutions to these problems are offered and tried to be implemented during various periods under different names as green, ecological, green design, ecological design, eco-design, energy-effective systems and energy efficient. The sustainability concept, on the other hand, extends the scope of all these solutions and covers all of them.

Sustainability is defined as follows by the Brundtland report issued by the World Commission on Environment and Development (WCED): "meeting the needs of the present without compromising the ability of future generations to meet their own needs" [13]. Sustainability is to live "by taking everything into consideration" and not "despite everything" [14]. Sustainable design defines the designing processes by taking into consideration environmental, social and economic dimensions as a surface of agreement. Sustainable design idea is an approach affecting all disciplines with its multi-dimensional outcomes as environmental, cultural, social, technological and economic. Design products and productions are created,

contests are organized, practical and empirical studies are carried out and symposiums are organized with this approach. However, the sustainability concept considered as important by all professions, not just by the design field, for the sake of environmental and social responsibility is engulfed into the whirlpool of the consumption culture. Sustainability is used as a label for fashion and consumption, taking its meaning away from its actual meaning.

While environmental approaches focus on consumption, others see this situation as a disaster scenario. A panic environment is created with mass manipulations where the assumptions are never fully realized, and it is claimed that a new market is created under the name of environmentally friendly products. The parties making this claim re-interpret the statistics and state that the environmental problems are exaggerated and the solution to them can be achieved with the cooperation of science and technology. These parties are criticized to defend companies with an economist perspective [15]. The problem is related to that what the interaction of the built environment with the communication coincides with in terms of society and how it responds to the environmental crisis remain in the background. The subject is reduced to energy efficiency and shell design. What is critical is to open to discussion what environmental approaches mean in design-based disciplines by foreseeing beyond the meanings we have used [16]. "All environmental problems can be solved; the hunger and poverty can be eliminated, and the distribution of income can be balanced. However, this can be achieved by giving new meanings to sustainable development and improvement, instead of lingering over technical details. ...while we continue to play environmentalism with the concepts given to us, the capital will continue to plunder the environment and the society" [17].

Even though sustainability idea provided as the solution of environmental problems has become an object of fashion and consumption in today's world, it is of great importance to design with environment in mind for the future of the world. As told by Parker, those who can give the answer to what the future scenario would turn into will be those who can shape the future. Therefore, the people studying design today and the education provided to them are of great importance [18]. Using this perspective, the conceptual background and applications of the course of Sustainable Design in Interior Architecture are designed with an integrated and critical approach on the sustainability. Moreover, the sustainability concept is opened to discussion at the course and a dialogic environment is established with the current subject of the professional environment.

3.2. Dialogism II: An interdisciplinary inquiry: "A coffee story"

The dialogic environment of interdisciplinary inquiry is established with a coffee story, being the first application of the course. Looking at the subject and creating relations with an interdisciplinary point of view encourage multilateral thinking and support creativity. This application has also introduced the course method and process to the students.

A period of 5-week is planned for the coffee story problem and its solution. During the first week, only two questions are asked to the students with the purpose of making them think about a subject they always experience or have never experienced. The first question is "What kind of coffee do you like?" After they share the type of coffee they like or do not like, they are asked whether "What kind of mug do you prefer for your coffee? Porcelain or paper?". The application is shared during the second week. The students are expected to question the preference they make in terms of impacts on the environment. As part of this questioning, it is discussed that the impacts of the process on the experiencer, impacts of the cup type on the material inside (coffee) and the impact created by the place where the experience takes place should not be ignored. The students then are asked to write a paper on their questioning and present this text with visuals by using different graphic techniques such as diagrams, schemas, collages. The information form used to share the application with the students and the application outcomes are presented in Table 1.

According to the examinations made on the studies carried out, the problem has raised awareness in students even if their approaches, outcomes and questioning processes are different. The students have realized how difficult it is to recycle the paper cup and how much energy its recycling consumes due to the chemical treatment made inside the cup. They have also discovered that this chemical is absorbed into the hot product placed in the cup and how hazardous it is to the human health. They have also realized the water consumption and chemical waste problem for the porcelain cups due to the glazing made even though it is less hazardous as compared to the chemical treatment in the paper cup. The awareness raised includes many forms from criticism of the consumption society we live in the decision of using own thermos even though they used to consider the paper cup to be more environmentally friendly.

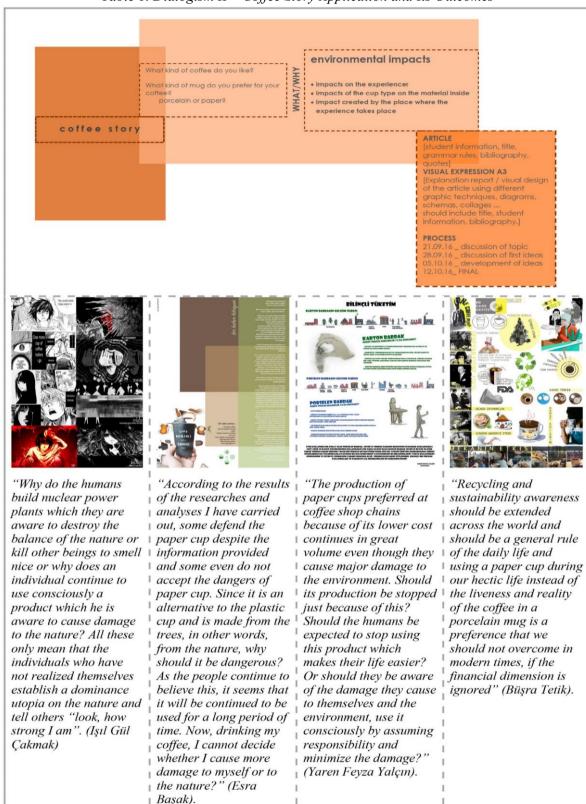


Table 1. Dialogism II – Coffee Story Application and Its Outcomes

3.3. Dialogism III: Establishing a connection with the design studio "critical thinking in the context of environmentally sensitive design"

The second application aims for establishing a dialogic relationship with the design studio. This goal is achieved by students' criticizing, questioning and thinking about their projects being the outcome of the design studio. That is because critical thinking and questioning are the essentials of creativity. The students are expected to question how they can re-create with environmental awareness a previous project they believe to have completed before.

The second application question is shared as the first application is about to end. It is the questioning of the project completed in the design studio during the previous term in the context of environmentally sensitive design. This questioning and recommendations are presented by using different graphic techniques and texts (Table 2). Discussions are opened and developed on the projects of the students in parallel with the lectures given for two weeks.

While the students re-create their projects in the context of environmentally sensitive design, most of them have focused on how to adapt environmentally friendly technologies into their projects. While the other subjects of sustainability have remained in the background, environmentally friendly technologies have become key solutions. One student has applied a critical approach to the subject, reconsidered his projects with a labyrinth metaphor and used comics to present the problems. It is understood that the students have identified the sustainability concept only with the technology. This shows that they have not understood the critical way of thinking or have problems while using it in practice.

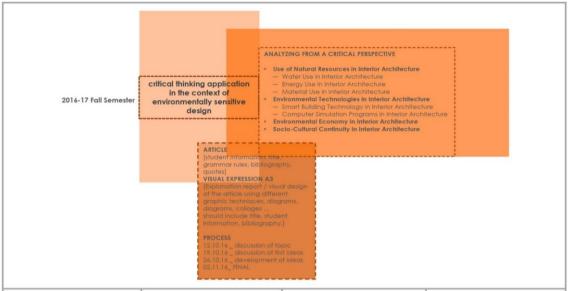
3.4. Dialogism IV: Transforming Conceptual Knowledge into A Design Product "Interior Architect in A Slow City"

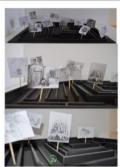
During the first seven weeks of the course, the first dialogic environment providing theoretical information, two applications and other two dialogism points are used. During the last seven weeks, applications are provided to support what is learned during the first part with the aim of transforming theoretical knowledge into a design product. According to Bateson and Martin, creativity is to create a new thing by bringing together something already existing with new forms and situations through designing [10]. Accordingly, the "interior architect in a slow city" is given to the students as the project subject and they are expected to develop design approaches.

The theoretical knowledge regarding the slow city concept is shared with the students during the theoretical part of the sustainability concept. An on-site visit is organized to Taraklı. During this trip, the municipality has made a presentation about Taraklı and how Taraklı has turned into a slow city. The students have had the opportunity to experience the area and communicate with the residents of the area. Then a workshop process is organized at the course for a period of six weeks and the students have developed their designs in groups.

The projects presented in Table 3 are categorized under two headings as square design and interior design of restored buildings. The project ideas for both subjects are shaped with light structural systems which will cause little interference with the environment and the building. Projects mostly focus on social and economic sustainability and other sustainable design details are limited with technical subjects.

Table 2. Dialogism III – Critical Thinking Application in the Context of Environmentally Sensitive Design and Its Outcomes

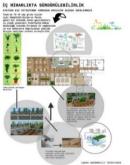




The student has considered the questioning of his project in the context of environmental design as finding one's way in a labyrinth and presented the concepts and problems he has encountered with comics. "Since the living space in the project is taken into consideration in terms of socio-culture, economic and ecological conditions have not been taken into consideration. ...If these conditions are taken into consideration, recommendations regarding the use of materials, energy and natural resources can be developed for the living spaces" (Hande Nur Açıkkolu).



The student evaluates the project in terms of certification systems in the context of environmental design. He looks for the answers to the auestions: What are certification systems? Which rules do they include? Which questions should his project provide answers to get these certificates? According to the student, "building management, health and goodwill, energy, water, land usage, I transport and material wastes, pollution and innovation should be taken into consideration" (Büşra Top).



The student evaluating his project in the context of environmental design has focused on the use of green plants and decreasing water consumption in the interior space. Water management is also evaluated as energy management in terms of water reaching the building. "We can examine the projects from different aspects in terms of ecologic features. Water management is an integrated process with many elements and tools. The correct use of the water alone is necessary but not enough for water management. Water management also means energy management'

(Leman Rahimbeyli).



The student has focused on adapting environmental friendly technologies to project when evaluating the project in terms of environmental design. He states the following with the following: "It is not difficult to make what is required to be done. Technologies which are less hazardous to the environment and even are not hazardous at all should be used. First these technologies should be developed. Architects should use the new system of Green Building and Sustainable Structure Technologies" (Esra Başak).

SLOW CITY POLICIES Environmental Policies TARAKLI Infrastructural Policies • Activities for Increasing the Urban Quality Benefiting from the · Bullet • Supporting Local Product and Production Hospitality Awarenes VISUAL EXPRESSION Supporting the Slow Food Activities and Projects SLOW CITY + INTERIOR ARCHITECT + TARAKLI = ? **DIGITAL SUMMIT** 'Interior Architect in A Slow City' [inter/trans]disciplinary design approaches SUMMIT Department of Interior and Environment Design_2016-17 Fall Semester ICM0943 SUSTAINABLE DESIGN IN INTERIOR ARCHITECTURE

Table 3. Dialogism IV – Interior Architect in a Slow City Application and Its Outcomes



This project focuses on the research question of how an environmentally friendly ecological design with a high design value and intellectual infrastructure will be made and designs such as public garden - sky watching area circulation item - sitting item - green modules in the application of the research question. The reason of the application of the design with such a simple and clear approach is to criticize the developed architectural approach in the system. Therefore, architectural touches are kept as minimum in the generated designs and areas open to the intervention of the public and the nature are planned (Cansu Çakır, Nihan Yağlıoğlu, İşılgül Çakmak).



This project focuses on the structure planned as tourism information office in Taraklı square whose interior space project has not been completed and which has not become functional. These units considered as awareness points are planned as a point where residents of Taraklı and tourists become aware of each other. The interior space design is supported with digital screens. They are planned as a space where the tourists can get information and the locals can organize meetings. The function of the space is supported with lightings and temporary colorful directions on the floor (Esra Başak, Büşra Top).



The top floor of Hacı Atıf Han is restored for the sale of traditional products. However, the planned designs in the interior space have not been completed. This project aims for bringing traditional products to the front and safeguarding the traditional culture. The equipment used in the interior space for eating, relaxing, productions, sales etc. are continued with sitting units, bicycle parking space and sales functions on the exterior pedestrian axis. Light wooden structure is used to ensure interiorexterior space integrity and little interference is made on the historical fabric (Büşra Tetik, Dilan Çelik, Serenay Dişkaya).



This project focuses on the laundry house located on the river in Taraklı but not currently in use and is given a new function as a library for children. A modular system made of woods is used inside the laundry house and is also used on the other side of the river for exterior use. Thus, alternative uses are recommended for climate conditions. The interiorexterior space integrity is ensured (Hande Nur Açıkkolu, Yaren Fevza Yalçın, Ali Özturan).

4. QUESTIONING OF CREATIVE DIALOGIC ENVIRONMENT

The outcomes of the creative dialogic environment are generated with the student applications explained above. The course structure recommendation for the creative dialogic environment is analyzed and evaluated with the survey given to the students. A survey comprised of 8 structured and non-structured open-ended questions is given to 15 students who have taken, attended and completed the course after their final exam delivery. The students are asked to write down for each dialogic environment three concepts which they think are related to the subject and the other question is given as an open-ended question in order to allow the students to share their comments. The questions are prepared to generate data regarding the purpose of the creative dialogic environment under Table 4.

Table 4. Relation of the Creative Dialogic Environment with Survey Questions

Relations	Questions
Dialogism I	Write down three concepts defining sustainable design.
	Explain sustainable design.
Dialogism II	Write down three concepts defining the "a coffee story" application.
	Explain the "a coffee story" application.
Dialogism III	Write down three concepts defining the "critical thinking application in the context of environmentally sensitive design".
	Explain the "critical thinking application in the context of environmentally sensitive design".
Dialogism IV	Write down three concepts defining the "interior architect in a slow city" application.
	Explain the "interior architect in a slow city" application.

The data collected with the survey are evaluated based on dialogism points and course structure. The first questions are used to evaluate the frequency of the use of the concepts written down by the students. The open-ended questions are used to code and analyze the use of concepts and subjects regarding the dialogic environment designed for the course and establishing relations with it.

Dialogism I

Students have defined sustainable design as sensitivity, green, culture, integrity, continuity, permanence, nature, recycling, continuance, ecologic, respect, flexible design, self-sufficient, requirement, society, functional, related to future, innovative and safeguarding of assets (Table 5). The frequency rates of repeating the concepts are close to each other. The ratio of continuity and ecologic concepts mentioned the most in the surveys is only 13%. The ratio of the frequency of use of integrity and sustainability concepts is 8%. The diversity and frequency of use of the concepts can be considered to ensure multi-directional thinking, being one of the course goals. It is understood from the answers given to the open-ended questions that the students have written down their own comments instead of usual definitions regarding sustainability. It can be said based on the answers that the course has raised awareness in and given a questioning perspective to the students.

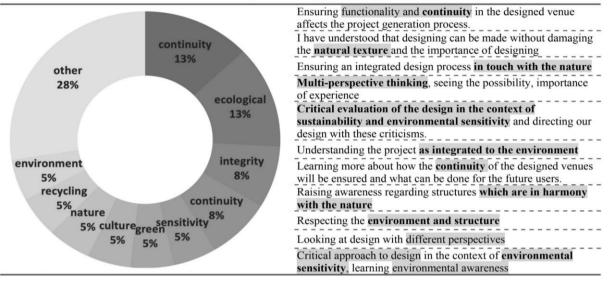


Table 5. Questioning of Dialogism I

Dialogism II

The coffee application is explained with sustainability, recycling, carbon emission, process, raw material, awareness, nature, damage, interaction, impact on the environment, questioning, objectivity, health, preference, individualism, integrity, continuity, user and re-use concepts. Even though the students define the application with different concepts, the frequency of using them is nearly the same as can be seen from Table 6. Sustainability and recycling are the most used concepts with a share of 12%, followed by process and questioning with a share of 8%. As the students think of process and questioning even with a low share, the purpose of the application is achieved but the achievement rate is low. Students have mentioned more the relation of the application with creativity in the open-ended question. One student has stated that he "started to drink coffee as a different taste". This shows that the relation of the application with sustainability and environment is questioned with a creative approach and raised awareness.

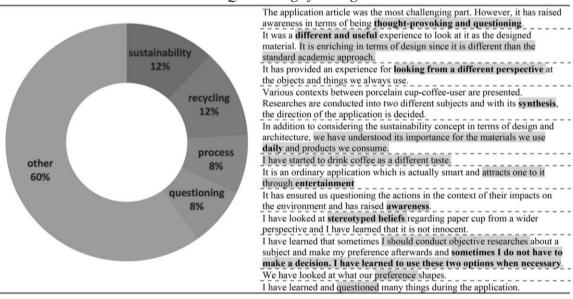


Table 6. Questioning of Dialogism II

<u>Dialogism III</u>

The critical thinking application in the context of environmentally sensitive design is defined with flexibility, continuity, water consumption, green building, certificate, sustainability, social impact, awareness, ecologic, environment, approach, design philosophy, integrity, conscience and sensitivity (Table 7). Environment and continuity, social impact and ecologic are the most used concepts, with a share of 15% and 10% respectively. Like the dialogism II application, this application is explained with many concepts with similar rates of frequency of use. The answers given to open ended questions show that contribution has been made to criticizing, questioning and explaining the reasons for them by the students regarding their projects. However, it is clear that the question of designing with sustainability in mind has not been answered. The subject is evaluated in terms of environmental technology dimension like in the abovementioned student applications.

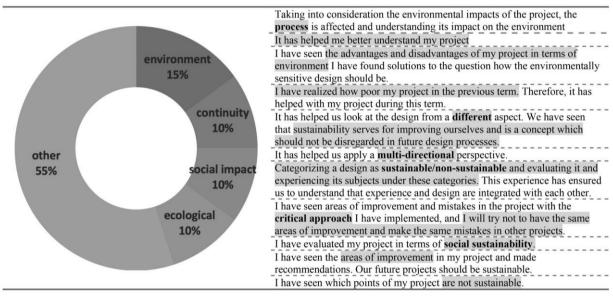


Table 7. Questioning of Dialogism III

<u>Dialogism IV</u>

The interior architect in a slow city application is defined by the students with the slowness, sensitivity, low population, natural, awareness, continuity, integrity, harmonization with the environment, culture, history, function, togetherness, limit, silence, respect and continuity concepts. Awareness and continuity are the most used concepts with a ratio of 12% while slowness, sensitivity, natural, integrity and harmonization with the environment are the second most used concepts with a ratio of 8%. Many concepts have been used like other dialogism points and no single concept has come to the forefront. In the open ended questions, the students have shared their opinions about the functioning and process of the application instead of talking about the slow city and their projects in this subject.

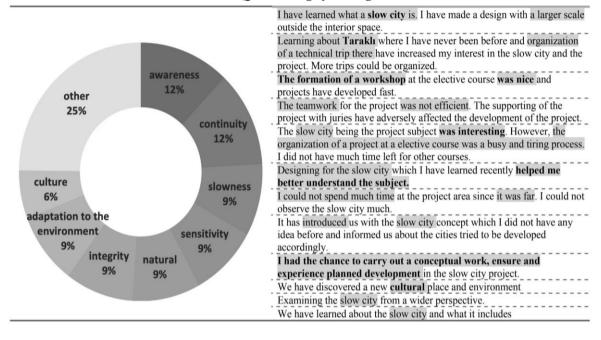


Table 8. Questioning of Dialogism IV

5. CONCLUSION AND DISCUSSION

The main goal of the course Sustainable Design in Interior Architecture is to recommend an innovative approach and improve the creativity of the students by going beyond the ordinary structure of the elective courses. To achieve this goal, the course is designed with a process and structure to support creative thinking. This structure is examined based on student applications and a survey and the following conclusions and recommendations are made. Students have explained all dialogic environments with a number of concepts in the answers they have given to the first semi-structured question of the survey. It is clear from the diversity of the concepts that the applications have supported the students to gain new perspectives. Despite many different concepts, continuity, ecologic and integrity are the most frequently used concepts to define the common ground. The multi-directional perspective aimed with the creative dialogic environment is achieved with different applications as understood from pluralism with common features among concepts.

Like the first question of the survey, the students have shared their comments regarding the relation of the application with creativity and the application process in the open-ended question of the survey. This shows that the awareness of the students is raised regarding critical thinking, multi-directional thinking and questioning. However, except for the "a coffee story" application, the sustainable design has a secondary place in the applications. While explaining the "a coffee story" application, both its relation with sustainable design and multi-directional perspective has come to the foreground. Based on the data generated from both questions, it is evaluated that the focus has not been on the sustainable design and it has remained in the background. This shows that the purposeful principle in the dialogic teaching model has remained in the background and the teacher has not ensured full efficiency in the management of communications. According to the outcomes of the applications and the data collected from the survey, the course includes diversity and supports critical thinking. Moreover, the diversity of the applications facilitates addressing each student since each student understands the subject in a different way and has a different approach for problem solving. However, the high number of applications has made it difficult for the students to focus

on the subject. Each creative dialogic environment can be planned in a flexible way to respond to different dialogic relations under a single application instead of different applications. To this end, a creative and flexible dialogic environment can be established under a single application focusing on various questions or problems. Inclusion of flexibility into the process will allow solution of the unexpected and unplanned problems in a creative way. In this context, a detailed research can be carried out on the relation between creativity, dialogism and flexibility in future studies.

In conclusion, a structure and process recommendation based on dialogism concept has been developed at the course of Sustainable Design in Interior Architecture under the light of changes, developments and new approaches in education. The dialogic environment has improved the creativity of the students and ensured them to gain awareness and think in a critical way.

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