

AN EVALUATION EXPERIENCE FOR INTERPRETATION DIVERSITY  
OF BASIC DESIGN PRODUCTS <sup>1</sup>TEMEL TASARIM ÜRÜNLERİNDEKİ YORUM ÇEŞİTLİLİĞİNE  
YÖNELİK BİR DEĞERLENDİRME DENEYİMİ

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**Öz: Amaç:** Tasarım; sahip olunan bilgi, beceri, zevk ve yaratıcılığın, farkındalık ve ilhamla yönlendirilerek, sanatsal ve estetik sunumla ifade edildiği zorlu bir süreçtir. Tasarım eğitimi verilen bölümlerde temel tasarım dersi, özgün eğitim formasyonu nedeniyle öğrencilerin anlamak ve anlamlandırmakta zorlandıkları bir derstir. Soyut bilgilerin, yaratıcılıkla yorumlanarak somut ürünlere dönüştürülmesi, öğrencilerin ilk defa karşılaştıkları bir uygulama olmaktadır. Bununla birlikte değerlendirme aşamasında yapılan eleştiriler, öğrenci tarafından kolay anlaşılmasında ve kendilerini başarısız olarak algılamalarına neden olmaktadır. Bu noktada değerlendirme aşaması temel tasarım eğitiminin önemli bir bileşeni olarak, anlaşılır ve öğrenciyi cesaretlendirir nitelikte olmalıdır. Ürünler, her bir öğrencinin özgün yorumunu içermesinden dolayı öğretim elemanları açısından da değerlendirme gücüne sahiptir. Literatürde yaratıcılık ve tasarım konusunda araştırmalar bulunmakla birlikte, değerlendirmeye yönelik çalışmalara pek sık rastlanmamaktadır. **Yöntem:** Tasarımda mutlak doğru var mıdır? Tasarım ürünleri değerlendirilirken nelere dikkat edilmelidir? Öğretim elemanı değişirse, değerlendirme değişir mi? Tasarım ürünleri ne ölçüde yoruma açıktır? Çalışmada bu soruları yanıtlamak üzere öğrencilerin, öğretim elemanının ve üçüncü şahısların görsel değerlendirmelerini ve anket sonuçlarını içeren nitel ve nicel veri değerlendirme yöntemi önerilmiş ve deneyimlenmiştir. **Bulgular:** Edebi bir metin okumasıyla, öğrencilerden temel tasarım öge ve ilkelerine dayanan bir kent betimlemesi yapmaları istenmiş; farklı ürünler ile yorum çeşitliliği ortaya konmuştur. **Sonuç:** Çalışmanın sonuçları, ürünlerin bir bütün olarak yoruma açık olduğunu ancak temel tasarım esaslarını barındırması açısından yoruma kapalı olduğunu göstermiştir. Bir başka deyişle tasarım ürününün başarısı, probleme yönelik çözümü doğru yansıttığı sürece mutlak; estetik ve bütünlük açısından ise göreceli olmaktadır. Bu çalışma ile, hem öğrenciler hem de öğretim elemanları için tasarım ürünlerinin değerlendirilmesine yönelik bir bakış açısı sunulmuştur.

**Anahtar Kelimeler:** Değerlendirme Yöntemi, Görünmez Kentler, Kritik, Temel Tasarım Eğitimi, Yorumlama

**Abstract: Aim:** Design is a challenging process in which knowledge, skill, sophistication and creativity are kneaded with awareness and inspiration; and expressed through an artistic presentation. Basic design course has a specific education formation thus students have difficulty in understanding and making sense of it. Transforming intangible knowledge based on design fundamentals into tangible products by interpreting, is a new experience. Besides, the criticisms made during the evaluation session cause them to perceive themselves as unsuccessful. At this point, the evaluation session should be understandable and encouraging the students. The products also contain evaluation difficulties for the instructors; they contain unique interpretation of each student. Although there are studies on creativity and design in the literature, studies on evaluation are not frequently encountered. **Method:** Is there an absolute truth in design phenomenon? What should be considered when evaluating design products? Does the evaluation differ when instructors change? To what extent the design products are open to comment? In order to answer these questions, a qualitative and quantitative evaluation method including questionnaire and visual evaluation of students, instructor and third parties was recommended and experienced in this study. **Results:** Students were asked to make a city description which was related to a literary text. The interpretation diversity has been presented through different products. **Conclusion:** The results indicated that the products are open to comment as an entirety but not open in terms of having the basic design fundamentals. An evaluation approach is presented for both students and instructors within this study.

**Keywords:** Basic Design Education, Critique, Evaluation Method, Interpretation, Invisible Cities

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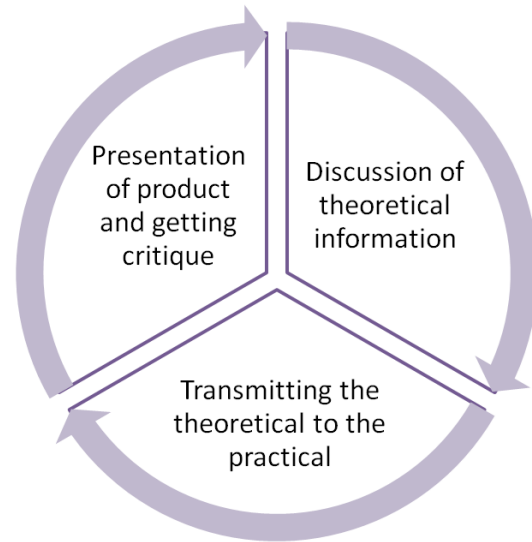
## INTRODUCTION

Basic design education essentially aims to create the optimum environment for the development of creativity and present new methods that will improve students' abilities to produce new and authentic solutions by purifying them from prior knowledge (Canbakal Ataoğlu, 2015: 2052). Basic design education curriculum generally consists of courses that develop design knowledge, artistic skills and technical background in terms of design elements and organization principles (Demirbaş and Demirkan, 2003: 437; Uluoğlu, 2000: 33; Akbulut, 2010: 5332; Canbakal Ataoğlu, 2015: 2055). In first year's curriculum of every university having art and design department in Turkey, regardless of the fields of specialization, there is always a course called 'basic design' which deals with the grammar of visual language (Akbulut, 2010: 5332). This visual language is taught to the students within basic design fundamentals in the basic design courses. Aypek Arslan (2012: 174) mentions seven teaching methods and their features in basic design courses. The first method is practical-theoretical integrity. The instructor is supposed to recommend and initiate the process of acquiring knowledge by related clues and basic concepts in this method; and theoretical knowledge should be studied in an integral way with practical one. The second method is defining design components

with similar forms in the nature. Students are required to comprehend that the rules of nature and art are similar by way of defining design components with similar forms in the nature; but their languages are different. The third method is in addition to template samples of studies and offering modern samples. Avoiding from copy or imitation of earlier template studies, the vision of students should be improved by offering modern samples in this method; just only showing sample cases should not lead to imitate. The fourth method is forming designs on paper first and in the setting of computer next. This method helps students to benefit from the potential power of computer for artistic expression by making try-outs and having many alternatives; but traditional design techniques should not be ignored. The fifth method is using modern methods developing the attitude of motivation and awareness in the course. The instructors are required to increase the motivation of students by positive attitudes towards them in this method. Thus they will be able to adopt in awareness with impulse, fiction, attraction and feedback. The sixth method is empirical and game based educational methods. Students should obey the rules and arrangements about the order and system of art and game; ordinary similarities should be avoided with quality of participation (Aypek Arslan, 2012: 175). And the seventh method is using the methods aiming at the fields of multiple intel-

ligence theory; schematic, mechanics, mental and perceptive tendencies. The course could be enriched in studios within visual and spatial intelligence by using colors, shapes, designs, textures, images and other visual symbols (Aypek Arslan, 2012: 176). In the light of these methods, it can be said that the author uses the first, third, fifth and seventh methods in her basic design courses. Basic design education curriculum at Faculty of Architecture in Trakya University is carried out in two parts as Basic Design I in fall semester; Basic Design II in spring semester. The fall semester is mainly based on ‘design elements’ such as form, size, color, value, pattern, direction and space; besides point, line, composition and geometry. In addition to this, spring semester content consists of ‘design principles’ such as repetition, harmony, contrast, hierarchy, hegemony and balance; besides unity, visual perception and organization principles of Gestalt mainly based on figure-ground relationship. The courses are conducted within forty minutes for theoretical and two hours for practical sessions in both semesters. After the theoretical information is shared with students by the instructor through written sources, visual samples and tangible materials at the first session; students are asked for application individually using determined materials beforehand in order to put knowledge into practice at the other. Following the presentation of the products, the students get

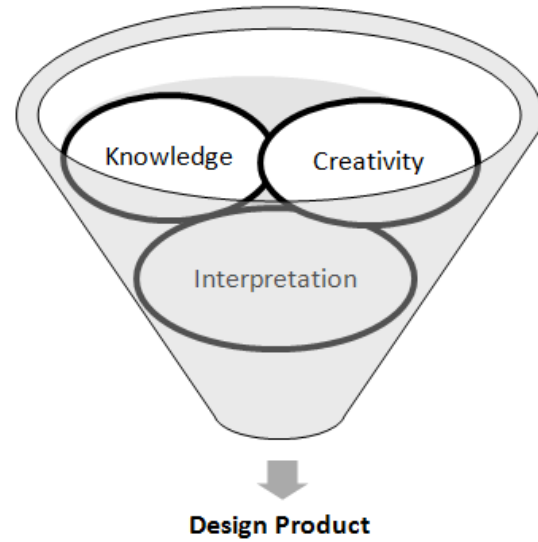
critique and instructor has feedback at the end of the sessions. Thus, while the students learn the concepts and principles on the one hand, they are also leaded to research and learn the techniques that they can use in all kinds of arrangements through applied studies on the other (Ertok Atmaca, 2014: 8). The process of the course in the meantime is shown in Figure 1.



**Figure 1. Process Cycle of the Course**

At the application session, the production process takes place within integration of learning, creating, interpreting and producing (Figure 2). Products are designed upon a given concept and by listening, watching and reading, observing or imagining experiences within cognition of basic design fundamentals. Students are required to perceive the given design problem to create their own design

language for solution and to create formal compositions by transforming design problems with creativity and skills, as mentioned by Demir and Özen Yavuz (2018: 1). Creativity is to make new combinations with the knowledge that is accumulated in the memory by an intense awareness and consciousness (Arıdağ et al., 2000: 16). Thus, the design product appears to have emerged through a filter as shown in Figure 2. Although creativity depends on students' ability; the contribution of knowledge and interpretation should be well adjusted. Düzenli et al. (2017: 1458) determined that the basic design course has contributed especially to the development of the creativity of students by giving them the ability to create forms and products; besides by teaching abstract concepts. Demirkan and Afacan (2012: 275) highlighted that the design artifact (product) has creative characteristics that depend on the cognitive and affective perception of person who assesses it. This is where the interpretation issue is involved both for students and instructors; followed by criticizing which is required for students in case that they shouldn't bypass the basic design fundamentals or they digress from the theoretical knowledge. Thus feedback in form of evaluation is necessary.



**Figure 2. Production Process in Basic Design Studio**

### AIM

The diversity of products in a basic design studio is conspicuous although basic design elements and principles are permanent. It is important to determine if the products properly reflect theoretical knowledge in terms of both design elements and design principles. It should be questioned if there are knowledge losses or mistakes according to instructor and if the products are meaningful, purposeful and aesthetic at the same time. How can basic design studies be evaluated “clearer” beyond the communication and criticism methods such as drawing and verbal expressions? This study aims to recommend an evaluation method which a) is based on basic design fun-

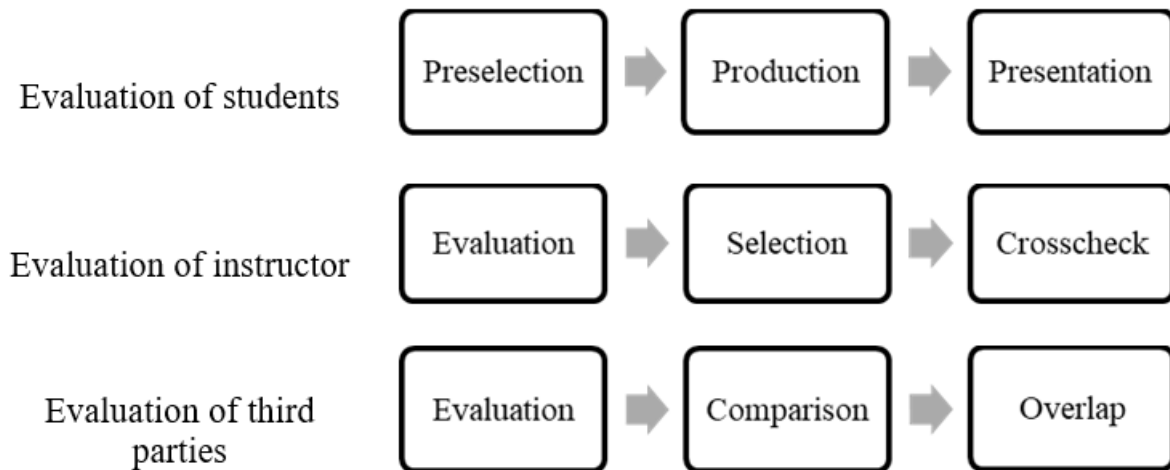


damentals b)is for basic design studio applications specifically c)questions the manner of the instructor d)involves qualitative and quantitative assessments.

## SCOPE

Design, design education, creativity, interpretivist approach and basic design evaluation (critiquing) are handled in this study. Besides, an evaluation method is recommended and experienced within a case study. By highlighting the interpretation issue, third parties are involved related to the current cycle shown in Figure 1, one move ahead. Thus, an evaluation method within this approach is shown as a model in Figure 3. This three-stepped evaluation method involving basic

design studio students, instructor and third parties are thought to enrich the evaluation, to confirm the overlaps and to verify differences and similarities; a sort of cross-check for students. The first step is the evaluation of students. They produce alternative solutions on a given problem, make self-assessments, choose one of them and then present the final product. With regard to their previous study on which they found out three elements of creativity as person, process and product, Demirkan and Hasırcı (2009: 301) put forward “product” as the strongest factor in determining the amount of creativity in design process, followed by person and process. The products are considered mainly as “interpretation of students” in this study.



**Figure 3. Model of Three-stepped Evaluation**

The second step is the evaluation of instructor. The critique in design studios is men-

tioned as “evaluation” within this study. The instructor evaluates the products according to



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design fundamentals and visual qualities as an entirety -this step includes “interpretation of instructor” partially- and then makes a selection among the products in order to present them to third parties for cross-check. The third step is the evaluation of third parties. Filling in a questionnaire and following the given instructions, they evaluate and compare the products. Thus “the interpretation of third parties” is actualized. The evaluation model is applied experimentally with a specific group of participants through a case study which was based on a literary text -invisible cities- of Calvino (2017: 108-109) as follows:

When he enters the territory of which Eutropia is the capital, the traveler sees not one city but many, of equal size and not unlike one another, scattered over a vast, rolling plateau. Eutropia is not one, but all these cities together; only one is inhabited at a time, the others are empty; and this process is carried out in rotation. Now I shall tell you how. On the day when Eutropia inhabitants feel the grip of weariness and no one can bear any longer his job, his relatives, his house and his life, debts, the people he must greet or who greet him, then the whole citizenry decides to move to the next city, which is there waiting for them, empty and good as new; there each will take up a new job, a different wife, will see another landscape on opening his window, and will spend his time with different pastimes,

friends, gossip. So their life is renewed from move to move, among cities whose exposure or declivity or streams or winds make each site somehow different from the others. Since their society is ordered without great distinctions of wealth or authority, the passage from one function to another takes place almost without jolts; variety is guaranteed by the multiple assignments, so that in the span of a lifetime a man rarely returns to a job that has already been his. Thus the city repeats its life, identical, shifting up and down on its empty chessboard. The inhabitants repeat the same scenes, with the actors changed; they repeat the same speeches with variously combined accents; they open alternate mouths in identical yawns. Alone, among all the cities of the empire, Eutropia remains always the same. Mercury, god of the fickle, to whom the city is sacred, worked this ambiguous miracle.”

The interpretation diversity of products was the main outcome of the literary text. Different usage of design principles and elements engaged students’ attention. Awareness of evaluation and design process was provided. So it can be said that this study contributes in terms of having feedback by the instructors, making sense of the course by students and gaining a different point of view to the evaluation by both.

## METHOD of the RESEARCH

A qualitative and quantitative evaluation method including questionnaire and visual evaluation were run. The model shown in Figure 3 has been tested through hypotheses with a case study in order to explain the method better. Thus, a creative and experimental method was used based on the pedagogy of basic design. The case study was carried out at Trakya University Faculty of Architecture and Department of Landscape Architecture in spring semester of 2017-2018 academic years. Differently from studio experiences carried out usually as mentioned so far; the case study has been conducted as an end of term assignment. The students were asked to read a literary text, to imagine a city description as a design problem, to solve it through basic design fundamentals and make a product presentation of it by a visual language. Thirty-nine students of first year Basic Design II course assembled as trio -thirteen groups- first of all. The groups were expected to describe the Eutopia city using design principles and elements in a wooden frame with size of 30 x 30 x 40 cm. Size of the shapes, materials and color usage were not limited. Evaluation of students: Following the text, students were asked to write a scenario about it. Usages of which design element and/or principle were chosen depending on this scenario. Utopia and imagination were thought to be

the source of inspiration and interpretation. It was predicted that several emotions and ideas should come to light; an evaluation and a choice was required by students. Finally, as being the travelers and observers of Eutopia, they have interpreted the text through a product using visual language formalized by fundamentals of basic design. Thus, transmission of theoretical knowledge to application was experienced. Evaluation of instructor: The assessment tools of the instructor were basic design fundamentals, scenario based upon the literary text, craftsmanship and aesthetic features of the products. After the products have been presented, five of thirteen of them were selected according to the evaluation of the instructor for the next step: third parties' evaluation questionnaire. Evaluation of third parties: Considering their passing grades of basic design II course, 15 students from the second, third and fourth years were invited to participate in this study. The reason of this was to reduce case study students' prejudices and perturbations and empathize with former students. Third parties have evaluated the selected products through a questionnaire form, literary text and scenarios written about them, following the instructions below:

a) Before getting started, the participants were asked to state and write down the principle which they pay attention at the first sight

when they saw the product. Then they filled in questionnaire form.

b) The questionnaire form consisted of three parts mainly. In the first part the success of design elements' usage such as form, size, color, value, pattern, space and direction were asked to be evaluated within five point Likert scale (totally agree, agree, changeable, disagree, totally disagree).

c) Similarly, the second part has questioned the success of design principles' usage such as repetition, harmony, contrast, hierarchy, hegemony, balance and unity within five point Likert scale.

d) The participants were asked to read the text (Invisible Cities) first; and then scenario of each group before filling the third part of the questionnaire form. Evaluation statements such as success, meaning and integrity of the product as well as its relevance to the text, composition, craftsmanship and material usage within five point Likert scale have created the third part.

e) Finally, third parties gave scores over 100 for each product.

The data derived from questionnaire form has been transferred to SPSS program; descriptive statistics, frequencies and correlation analyzes have been displayed.

## LIMITATIONS of the RESEARCH

One of the limitations of the study is that, the recommended method is applied with a specific student group. Thirteen groups could not succeed; just five of them have passed the instructor's evaluation. The reason was that during the case study none of the groups were given a critique; they faced all the process by their own. The studies about design and creativity have been mostly encountered through cooperation with students in literature. Therefore, this can be said as a limitation; besides it was a risk. Furthermore, third parties were 15 participants as the second limitation; there was no chance for more than 15 former students; because general averages were low unfortunately. The underlying reason for both is the difficulties of the student during the process of the basic design course in fact. Transferring the definitions from European Qualifications Framework for Lifelong Learning and the Bologna Process, Kavas et al. (2016: 5824) analyze these difficulties in three levels such as knowledge, skills and competence. According to the authors:

“The Difficulties at the Level of Knowledge: In the early phases of the basic design course, the elements and principles of basic design are introduced. The students are expected to analyze and conceive the existent objects around them using this knowledge and then design problems are assigned. These expect-



tations constitute the first set of difficulties experienced by the students. At first, the student tries to memorize this basic knowledge; however, this straightforward understanding of knowledge is incompatible with the basic design assignments demanding implementations guided by analytical and critical thought.

**The Difficulties at the Level of Skills:** The student has to acquire skills in order to think in an abstract manner, to make formal analysis of concrete objects, to infer the main theme and structure underlying these forms and to conceive these principles through the abstract language of design. The main difficulty of the student in this level is his/her incapability in using abstract language of design for understanding the environment and expressing new proposals. If the problems of this level cannot be resolved, the integrity between the design problem, the process and the end product cannot be realized because the student tries to attach a concept to the end product in a straightforward manner. On the contrary, the design concept is intrinsic to the whole process and the guidelines of the initial concept should be followed through whole process.

**The Difficulties at the Level of Competence:** At this level, the student has to think through alternative solutions, to derive criteria of evaluation, to learn how to make selections among these alternatives and to develop the

selected alternative into a finished end product. Since the educational basis of the student is constituted by the idea of absolute truth, deriving alternatives becomes a major difficulty. Generally, the student feels attached to a single solution and defends it as if it is the only possible solution for the problem. After studio critics, the student cannot find ways to modify the initial idea and tends to change the idea completely. If this process of change continues every week, the design process cannot be consistent and the student feels anxiety. At this point if the dialogue between the student and the instructor cannot be established, the traditional master-apprentice relationship of the architectural profession cannot be conceived. This can become a significant drawback in the remaining part of education and professional life.” (Kavas et al., 2016: 5824).

## PROBLEM of the RESEARCH

Most of the students face a specific and unique education system at faculties of architecture and so forth. They learn a new language typical for design; technical drawing, abstract expressions, sketches and modeling. In basic design courses students are encouraged to visualize the world around them in various ways (Asasoğlu, et al., 2010: 3539). Considering that each student has different socio-cultural and demographical background, teaching them how to think sophisticatedly

and how to design becomes a tough process. While the students are directed to make sense of the concept given to them within basic design principles and elements, they are also expected to express themselves by actualizing a design product all the time. This process has not been experienced by them before and they are not used to this, no doubt. According to Kavas et al. (2016: 5823) the students get used to the multiple choice examination system which assumes that there is absolute and single truth; and this system does not include analytic and critical thought in sufficient level. Therefore, it becomes very difficult for the student to get acquainted with the design process where infinite number of correct ways can be possible for resolving the same design problem (Kavas et al., 2016: 5823). Besides, being a receiver and transmitter -in that order- during basic design courses, learning and communication styles of students (Uluoğlu, 2000: 38) constitute an important pillar of the process. The students are required to define and interpret their design problem in a consistent manner, to continue the design process by proposing alternative solutions, to select a solution among these alternatives by explaining this selection on the basis of reason, to take responsibility individually, to make interpretations and to learn through practicing (Kavas et al., 2016: 5823). The sum and substance of these, being criticized about what they have done wrong or incom-

plete in the evaluation, may lead especially the first year students to situations that they cannot tolerate. They perceive it as being unsuccessful and become encouraged at short notice. Current youth wants to be conceived. Being clearer about the evaluation as aimed with this study; students will understand and make sense of the course. Thus, the research problem is based on the following question: “How can an evaluation be “clearer beyond the words” in order to make students comprehend?” Although there are studies about design and students’ cognition, inspiration and creativity in the literature, studies about evaluation are not frequently encountered. This statement was also mentioned by Çıkış and Çil (2009: 2104) as they have compared their review of the literature and observations of different architectural design education environments in Turkey. Besides, this evaluation and critiques generally are thought to be intangible for students. Correspondingly, this study aims to present a tangible evaluation related to the problem.

## SUB-PROBLEMS of the RESEARCH

The instructors and research assistants of the course may also face complexity during evaluation. Educational choices and communication styles (Uluoğlu, 2000: 38), fair grading, students’ comprehension, comparing and criticizing the products due to the creativity and the interpretation can be considered

among these. Although the instructor has the theoretical knowledge and experience, research assistants should be trained efficiently. Besides, representation of knowledge with a communicative intent will be different from one's own internal representation as Uluoğlu (2000: 36) mentioned: "What happens within an individual's mind and what happens between two people may lead to different results". So, the matter is not only giving the course theoretically but gaining experience, alternative point of view and communication ability with the students during evaluation. This statement is accepted valid for all three; instructors, research assistants and students in this study. The question "Among interpretation variety, does the evaluation differ if the instructor changes?" is suggested as the sub-problem of the research. Because definition of what is personal-subjective and what is general-objective becomes necessary when studying the critiques-so called evaluation-and knowledge of the instructor (Uluoğlu, 2000: 37).

## HYPOTHESES of the RESEARCH

The interpretation diversity of products derived from the same literary text was foreseen through different design elements and principles usage related to the scenarios. Thereby, hypotheses were generated to conduct analyses as follows:

1. Design product is not open to comment in terms of theoretical knowledge. The product either reflects the usage of a specific design element/principle according to the scenario or not. If it reflects, then both the product and evaluation of students can be accepted as successful technically.

2. Design product is open to comment in terms of its content integrity. Various evaluations can be made by several evaluators. If the purpose and meaning of a product is determined clearly for evaluators according to the scenario, then the results of evaluation method and given scores reflect the success of the product or not.

## THEORETICAL FRAMEWORK

Design is the human power of conceiving, planning and making products that serve human beings in the accomplishment of their individual and collective purposes (Buchanan, 2001: 9). Cash and Hartlev (2017: 96) suggest that nudge, persuasion and the influencing of human behavior through design are increasingly important topics in design research and in the wider public consciousness; the impact of priming delivered through environmental cues is mediated by an individual's perception of self and social norms. Akbulut and Kesdi (2017: 1198) define the design as the process in which cognitive skills as well as physical abilities function holistically to reach to fruition. The field of design, no mat-

ter what the designed product is, appears to be one of the most complicated fields that depend on occurrence of some sense of creation that is believed to have connections with ‘aptitude’ (Çubukçu and Gökçen Dündar, 2007: 68). Uluoğlu (2000: 39) classifies the design knowledge as descriptive and objective related to its structure but subjective due to content and personal ingredient. Hence, design education must be handled sensitively.

Design education, which is intertwined with abstract concepts, has a complex and contradictory structure, which is comprehensive, not too obvious, and difficult to define, understand, classify and form (Yürekli ve Yürekli, 2004: 53-62). The main purpose of design education is to reveal and develop students’ creative thinking potential (Onur and Zorlu, 2017: 550). Ertok Atmaca (2014: 9) states that, design education aims to develop and make use of creative thinking, to learn making benefits from elements such as color and form, to think two and three-dimensional, to create a design language by combining the thoughts with visions, to design composition using plastic elements of art, to solve form-space relationship, to compose own expression language and to be aware of technical improvements of the century. In order to carry out these, design education students firstly encounter with basic design courses.

Basic design as a concept was born as a discipline definition that aims to bring students’ readiness levels to a certain point; to help students to recognize their personal characteristics; to control their judgments and to get rid of prejudices in Bauhaus (Seylan, 2019: 22). Similarly, Aypek Arslan (2012: 176) defends that the basic design education should be studied in a way to increase the level of perception and cognition within a student-centered approach. Although the students focus on the final product, the importance of the process must be signified. Questioning the design process in which general opinion indicates that it is objectified and there is no personal ingredient in carrying out, Uluoğlu (2000: 35) considered the rational activity of the mind in addition to the various personalities of students contributed skillful activity of the body (hands) and intuitive feelings of the soul in design processes and education. Beşgen et al., (2015: 430) also emphasize this approach and state that the basic design education comprises all expressional ways and it is the effort of expressing the abilities and power of creativity in aesthetic level and transfer of thinking, emotions, and impressions of a person. According to Onur and Zorlu (2017: 545) only a good design product is not enough as an output of the design activity in the studio; the important thing is leading the students to gain ways of behavior



about design process. Creativity is counted among these ways.

Creativity is an essential indicator of product quality and capability (Christiaans, 2002: 41-54; Horn and Salvendy, 2006: 171-178; Kaufman, et al., 2008: 171-178). Dorst and Cross (2001: 425) state that creativity in the design process is often characterized by the occurrence of a significant event called 'creative leap'. Thus the authors consider the studies of creativity in design as necessary in order to develop a better understanding of how creative design occurs (Dorst and Cross, 2001: 425). For instance, Lu (2015: 59) puts forward that, the creative quality of design outcomes is influenced by a series of cognitive applications and combinations during the design process. Cognitive behaviors such as problem identification, planning and resolution greatly affect design creativity outcomes according to him. Besides, Schön (1984: 2-9) characterizes the artistry of designing as a special form of reflection-in-action in terms of reflective conversation with the materials of the design situation. He suggests that a design can be describable if practitioners can learn to reflect on their own reflection-in-action; considering that the knowledge is embedded in the action and is tacit.

According to McDonnell (1997: 473), a variety of knowledge elicitation methods and representational formalisms exist which are

consistent with an interpretivist perspective and which can be brought to bear on the study of designing. An interpretivist perspective focuses on understanding action as purposeful, meaningful interaction in a social setting. The interpretations are described as reflective conversations in which the designer frames different views of the situation and develops ideas about solutions (McDonnell, 1997: 473). While novice designers need to develop their own sensibilities, values, preoccupations with confidence and gain ability to manifest these in what they design (McDonnell, 2016: 10), criticizing is another issue related to design education.

Considering the critique becomes crucial in case of first year basic design studio, owing to its role in introducing students with the required skills for becoming a reflective practitioner (Ruhi Sipahioğlu, 2012: 420). Assessment in the form of criticism is carried out in a design studio, where students acquire skills and knowledge, forge judgments about their design outcomes, and get feedback from their instructors (Casakin and Kreidler, 2008: 666). Similarly, Christensen and Ball (2016: 116) state that, in an educational setting the design critique enables students to reflect upon both the design process and the state of the design, and allows the instructor to reflect on the students' performance. Thus, this process is not only a lecture given, but also a social interac-



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tion between the teacher and the students and among the students (Demirbaş and Demirkan, 2003: 438). So, critiquing in design studios involves a wide range of communication modalities including speech, written comment, drawing and gesture (Oh, et al., 2013: 310). For further information about types and processes of assessment methods in architectural design education, Çıkış and Çil's study (2009: 2103-2110) can be examined. The authors use the term "assessment" (2009: 2104) and refer it to involve identification of goals and purposes, selection of procedures, methods, and measures, coordination of timing, analysis of data, interpretation of results, and formulation of responses to the results. They found out that most common format of reviewing in first year education is panel criticism without any incertitude; individual criticisms and juries are preferred frequently especially in contrast to the upper years of architectural education (Çıkış and Çil, 2009: 2108-2109). Highlighting the critique as a communicative activity of instructor with the students, Uluoğlu's (2000: 37-38) "studio master (SM) - student (ST) interaction in the studio" model indicates the educational choices and communication style of the instructor besides his/her characteristics are significant on one hand. On the other hand, students' learning style and communication style should be considered for sure. The critique codes are mentioned as linguistic (words), spatial

(schemes, drawings, three-dimensional models, images), logical-mathematical (numbers) and bodily-kinesesthetic (gestures) in this interaction model (Uluoğlu, 2000:38). Usta et al. (2000: 42) state that the evaluation takes place in two stages in basic design studios; first the instructors evaluate the products among themselves and then make critiques with students through discussions. Thus, the students get involved in both the course and the evaluation; excluding the traditional monolog process. This approach also helps to examine the knowledge of students, during evaluation. They gain experience about evaluation; not only for their own products but also for the other ones in a responsible manner (Usta et al. 2000: 43).

As being a challenging process in basic design education, the issue of evaluating the design product and its process were discussed within a case study and an experimental method based on a model in this study. Related to the teaching methods of basic design mentioned before by Aypek Arslan (2012: 174) in the introduction part, it can be said that the basic design course was conducted by providing practical-theoretical integrity, using of multiple intelligence, besides motivational methods and offering modern samples at the faculty in which the case study has occurred. Besides, the feedback of the study led us to the empirical and game based edu-


cational methods which can help students to make meaning of the course.

## FINDINGS


According to the evaluation model shown in Figure 3, each group made an evaluation among its members. The scenarios were written; principles were chosen and products were presented by using various design elements and principles at the first step (Table 1-5). At

the second one, the instructor evaluated and eliminated the products by taking opinion of the research assistants also. The selected products (Figure 4) were successful; design elements and principles were used properly in terms of knowledge, composition, material and craftsmanship. Besides, they were meaningful as being relevant to the scenarios. Thus they all had integrity as a final design product.

**Table 1. Students' Evaluation-Presentation of Group 1**

PRODUCT 1	
<b>Principle:</b> HIERARCHY	
<b>Students:</b> Ersoy Deniz, Osman Özyakış, Görkem Ekinici	Design
<b>Scenario:</b> Eutopia is described as the union of all the cities as repeating itself every time after solving the problems. The problems regenerate themselves every time in every city after they are engulfed by wormhole shown as the red part of the design. This part also indicates the depth. The dark rolls represent the new problems that occur in the new life of the new city. As the time goes and when the rolls grow up, they attend the gravitational field of the red gate and they fizzle out. A new formation begins in this way. Whatever the new cities and new lives occur, it is mentioned that every solution brings different problems together with it and there is nothing such as impeccability.	

**Table 2. Students' Evaluation-Presentation of Group 2**

PRODUCT 2	
<b>Principle:</b> REPETITION	
<b>Students:</b> Rampicha Petsenik, Esmâ Dudu Türhan, Reyhan Keser	Design
<p><b>Scenario:</b> Different cities are represented as interpenetrating formation by using green colored shapes wrapping around the universe: Eutropia. The similarity of the cities is predicted here. Whether different life time occurs since inhabitants move from one city to other, all of the cities include the same actors, scenes, speeches, landscapes and life at the end in an endless way. This endless way is shown as the wooden sticks. Inhabitants left traces on the abandoned cities; their traces can't be deleted from time in other words. Time doesn't matter at a specific moment; when all the time lapses are cleared from the point of view; the cities are all seen the same.</p>	

**Table 3. Students' Evaluation-Presentation of Group 3**


PRODUCT 3	
<b>Principle:</b> HEGEMONY	
<b>Students:</b> Ecem Karabulut, İlkay Duyar, Tevhide Bolat	Design
<p><b>Scenario:</b> When we observe the Eutropia as a whole, it can be said that the cubes represent different cities of it. The wooden sticks are used to define the direction of water ways and winds. Besides they are the connection of different cities providing access; once a passenger enters Eutropia lands, travel is possible within its chessboard network. Everything in Eutropia is connected. There is no way out. The reflection of cycle circulation is mentioned with the repeating lines on the base. Above all Mercury dominates the city from the black cube.</p>	



Table 4. Students' Evaluation-Presentation of Group 4


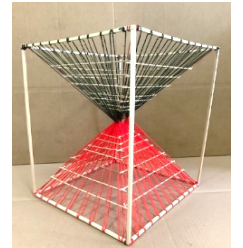
PRODUCT 4	
<b>Principle:</b> CONTRAST	
<b>Students:</b> Eren Can Türker, Gamze Ertan, Sibel Demirtaş	Design
<p><b>Scenario:</b> Each organization is a settlement of Eutopia. Different space organizations are represented through different points of view. Sometimes challenging gravity upside down sometimes inclined. Inhabitants experience different time lines with various dynamics. Black, white and grey tones (shimmering silver) change place in every settlement. Although pattern and material stays constant as the main characters of cities, various usages of them can be observed. Because different but similar lives, people, daily routines take place in each contrast settlement.</p>	

Table 5. Students' Evaluation-Presentation of Group 5

PRODUCT 5	
<b>Principle:</b> BALANCE	
<b>Students:</b> İnci Öztürk, Mustafa B. Bayraktar, Gülçin Çavuşoğlu	Design
<p><b>Scenario:</b> Eutopia is a city which is repeating itself. Thus, the same life cycle repeats itself too from dark green side to red one. While life is passing through time from the largest source to the end, problems begin to occur. These problems start with small amounts and get huger as mentioned in the red part. At that time life ends, Mercury turns over the hourglass, resets time and everything begins over again.</p>	





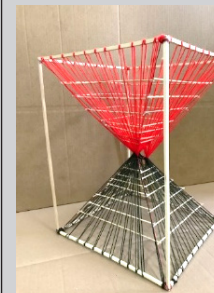
				
product 1	product 2	product 3	product 4	product 5

Figure 4. Instructor's' Evaluation-Selected Products

Referring to the third step of the model, third parties evaluated these products within a questionnaire form, compared them through scores and shared the results with the instruc-

tor (Figure 5). And then, statistical data were analyzed in order to test hypotheses of the research.





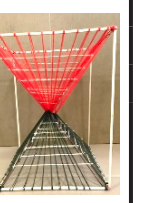
						
	Product number	1	2	3	4	5
	SCORE	74.3	81.3	78.3	74.3	69.3
	Principle usage	Hierarchy	Repetition	Hegemony	Contrast	Balance
DESIGN ELEMENT	Form					
	Size					
	Color					
	Value					
	Pattern					
	Space					
	Direction					
DESIGN PRINCIPLE	Repetition					
	Harmony					
	Contrast					
	Hierarchy					
	Hegemony					
	Balance					
	Unity					

Figure 5. Third Parties' Evaluation of Design Elements and Principles

According to the frequencies, the third parties paid attention to 'direction' and 'space' usage with 4.47 and 4.33 mean values among

design elements for product 1. For product 2, successful elements were "value" and "color" with 4.07 and 3.93 mean. Third product drew

attention to “form”, “size” and “space” usage with 4.67, 4.53 and 4.20 mean values. The participants stated that “form”, “size” and “pattern” elements with 3.87, 3.80 and 3.67 mean values were successful for product 4. And finally “color”, “direction” and “size” elements were stated with 4.33, 4.27 and 4.20 mean values for product 5. Besides design elements, design principles were also evaluated by third parties. All the highest means for each product matched with the principles mentioned in the scenarios exactly: hierarchy principle had 4.00 mean value for product 1; repetition principle had 4.20 mean value for product 2; hegemony principle had 4.73 mean value for product 3; contrast principle had 4.60 mean value for product 4 and balance principle had 4.53 mean value for product 5. Design element mean, design principle mean and evaluation mean were calculated as well as the score of each product; because correlation between score and means (element, design and evaluation) was required to be investigated in order to test the hypothesis. As the sample size was less than 30 ( $n=15 < 30$ ), non-parametric Spearman Correlation was used to find out if there was a relation (Table 6). In case of determining a correlation, the tests went on for confirmation of which parameters were relevant. Finally, an overall evaluation was put forward (Figure 6).

## DISCUSSION

Fundamentals of basic design are still relevant in contemporary design education. The pedagogy of basic design promotes a creative and experimental methodology that develops the learning style and cognitive abilities of students with respect to the fundamental principles of design, as Boucharenc mentioned (2006: 1). Besides, Asasoğlu et al. (2010: 3548) stated that basic design courses should be reviewed and revised frequently and efficiently. While Yanarateş (2018: 209-232) developed a theoretical framework in context of art and design, Tuztaş and Koç (2019: 104-137) studied on teaching/learning technique based on experimental basis. Similarly Bekdaş and Yıldız (2018: 324) utilized conceptual thinking as a tool and they have based their conceptual framework on the items: relating, meaning, communicating, analysis- synthesis and abstraction in order to contribute design process. Ruhi Sipahioğlu (2012: 421) adopted the idea in which a good assessment should have a purpose of guiding, motivating and reinforcing student learning and she investigated how critics actually guided and motivated students. Expressing that there is no universally accepted design teaching theory or pedagogy in architecture, she commended to define a level and step stone to compare the analyzed data by interpreting case studies. Besides, Kavas et

al. (2016: 5823) suggested the instructors to devise teaching methods which can solve the educational problem that does not include analytic and critical thought the students were used to. Thus they analyzed the elements and principles of basic design through the design products of this period reinterpreted El Lissitzky's Suprematist interpretations of the painterly space for a contribution to basic design education (Kavas et al., 2016: 5813-5825). Similarly Ünver (2015: 113) advises the instructors to focus on developing the students and their designs through their characteristics and tendencies proceeded together with respect to combination of theoretical knowledge and production.

With an approach that takes all these into account, innovations were considered for the basic design course while meditating this study; specifically for evaluation process. Ultimately, an evaluation method was recommended and experienced through literary text and basic design fundamentals. The findings

enabled us to display the interpretation diversity of basic design products first of all (Figure 4). Although the evaluators paid attention to different design elements and gave scores according to their own point of view (Figure 5), it was precious that the design principles proposed by the students were perceived and determined in the same way by the instructors and third parties.

## CONCLUSION

The first hypothesis has suggested that design product is not open to comment in terms of theoretical knowledge; the product either reflects the usage of a specific design principle according to the scenario or not. It was found out that there was no relationship between neither scores and elements nor scores and principles for each product statistically (Table 6). Besides, all the products have reflected the usage of design principles as mentioned in the scenarios according to Figure 5. It can be said that the first hypothesis has been proved; all the products are technically successful.



**Table 6. Correlations for all Products**

Correlations						
			score_1	principle_1	evaluation_1	element_1
Spearman's rho	score_1	Correlation Coefficient	1,000	,331	,863**	,445
		Sig. (2-tailed)	.	,228	,000	,097
		N	15	15	15	15
	principle_1	Correlation Coefficient	,331	1,000	,380	,791**
		Sig. (2-tailed)	,228	.	,162	,000
		N	15	15	15	15
	evaluation_1	Correlation Coefficient	,863**	,380	1,000	,235
		Sig. (2-tailed)	,000	,162	.	,398
		N	15	15	15	15
	element_1	Correlation Coefficient	,445	,791**	,235	1,000
		Sig. (2-tailed)	,097	,000	,398	.
		N	15	15	15	15

Correlations						
			sco- re_2	principle_2	element_2	evaluation_2
Spearman's rho	score_2	Correlation Coeffi- cient	1,000	-,103	,383	,683**
		Sig. (2-tailed)	.	,714	,159	,005
		N	15	15	15	15
	principle_2	Correlation Coeffi- cient	-,103	1,000	,085	,264
		Sig. (2-tailed)	,714	.	,762	,342
		N	15	15	15	15
	element_2	Correlation Coeffi- cient	,383	,085	1,000	,568*
		Sig. (2-tailed)	,159	,762	.	,027
		N	15	15	15	15
	evaluation_2	Correlation Coeffi- cient	,683**	,264	,568*	1,000
		Sig. (2-tailed)	,005	,342	,027	.
		N	15	15	15	15

Correlations						
			sco- re_3	element_3	principle_3	evaluation_3
Spearman's rho	score_3	Correlation Coeffi- cient	1,000	,225	-,140	,596*
		Sig. (2-tailed)	.	,420	,618	,019
		N	15	15	15	15
	element_3	Correlation Coeffi- cient	,225	1,000	-,055	,052
		Sig. (2-tailed)	,420	.	,845	,855
		N	15	15	15	15
	principle_3	Correlation Coeffi- cient	-,140	-,055	1,000	-,028
		Sig. (2-tailed)	,618	,845	.	,922
		N	15	15	15	15
	evaluation_3	Correlation Coeffi- cient	,596*	,052	-,028	1,000
		Sig. (2-tailed)	,019	,855	,922	.
		N	15	15	15	15
*. Correlation is significant at the 0.05 level (2-tailed).						

Correlations						
			sco- re_4	evaluation_4	principle_4	ele- ment_4
Spearman's rho	score_4	Correlation Coeffi- cient	1,000	,722**	-,189	,071
		Sig. (2-tailed)	.	,002	,499	,801
		N	15	15	15	15
	evaluation_4	Correlation Coeffi- cient	,722**	1,000	,102	,312
		Sig. (2-tailed)	,002	.	,717	,258
		N	15	15	15	15
	principle_4	Correlation Coeffi- cient	-,189	,102	1,000	,258
		Sig. (2-tailed)	,499	,717	.	,354
		N	15	15	15	15
	element_4	Correlation Coeffi- cient	,071	,312	,258	1,000
		Sig. (2-tailed)	,801	,258	,354	.
		N	15	15	15	15
**. Correlation is significant at the 0.01 level (2-tailed).						



Correlations						
			sco- re_5	principle_5	evaluation_5	ele- ment_5
Spearman's rho	score_5	Correlation Coeffi- cient	1,000	,203	,599*	,425
		Sig. (2-tailed)	.	,469	,018	,114
		N	15	15	15	15
	principle_5	Correlation Coeffi- cient	,203	1,000	,506	-,131
		Sig. (2-tailed)	,469	.	,054	,642
		N	15	15	15	15
	evaluation_5	Correlation Coeffi- cient	,599*	,506	1,000	,329
		Sig. (2-tailed)	,018	,054	.	,232
		N	15	15	15	15
	element_5	Correlation Coeffi- cient	,425	-,131	,329	1,000
		Sig. (2-tailed)	,114	,642	,232	.
		N	15	15	15	15

\*. Correlation is significant at the 0.05 level (2-tailed).

The second hypothesis has suggested that design product is open to comment in terms of its content integrity; the results of assessment criteria and given scores reflect the success of the product or not. It was found out that there was a relationship between the scores and general evaluation of products differing for each of them as shown in Table 6 according to Spearman Correlation analyze. Besides, in Figure 6, third parties' (T) and the instructor's (I) evaluation can be seen as well as within the overlaps and differences. Thus, it can be said that the second hypothesis has been

proved; the products are open to comment in terms of content integrity as an indicator of interpretation. Why do the products of a design studio diversify while design elements and principles are permanent? How does the instructor evaluate the products when "an interpretation issue" is involved? How does anyone else knowing theoretical knowledge evaluate these products? Is each evaluation the same for everyone? A recommended evaluation method was experienced in this study to answer these questions. It is thought to contribute:

- To provide a self-criticism for the instructor
- Make the assistants of the course gain ability for evaluation
- To reveal that there is no absolute truth in design
- To be fair in grading
- Make students find out the meaning of the course within transparency in evaluation by this study.





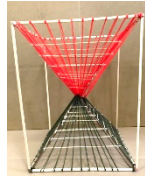
Besides, the case study enabled:

- Improvement of reading and writing practices of students in an interpretivist approach

- Development of decision-making and self-critiquing abilities of students among alternatives
- Activation of inspiration, imagination and creative thinking of students
- Production of three-dimensional design outcomes as a result of cognition, solution and interpretation

In addition to these, the usage of visual language in basic design has been shown once more with this case study. It is quite exciting that a basic design application was experienced within a literary text; this was thought as rare -relatively- in literature.

Figure 6. General Evaluation of Third Parties and Instructor

											
		Product 1		Product 2		Product 3		Product 4		Product 5	
		I	T	I	T	I	T	I	T	I	T
GENERAL EVALUATION	Success										
	Relevance										
	Meaning										
	Integrity										
	Composition										
	Craftsmanship										
	Material										

## SUGGESTIONS

Acquired products were evaluated within the usage of design elements and principles besides their content integrity in order to examine interpretation diversity in this study. The most remarkable success and satisfying part of the study was the results of analyses. Despite being tested within a small sample size and the toughness of statistical analyses, the correlations and indications resulted exactly as aimed. Statistical inferences were considered in order to make the study meaningful in scientific area beyond a case study. In addition to this, an experience through a literary text was thought to contribute to design education domain. It is possible to improve the methodological approach and increase sample size in future studies. Design is a tough process in which knowledge, skill, awareness, soul, sophistication, inspiration, time and creativity should be brought together efficiently within artistic and aesthetic approach. Thus, design education requires patience and attention on students while conveying knowledge and encouraging them to think, to design, to interpret and to produce in long term.

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Because of transforming intangible concepts into tangible products, students get stressed in basic design courses. Besides, the instructors have difficulty in evaluating and grading the products due to creativity and interpretation. Therefore, it is important to encourage students by making lessons as an interactive creative competition game using this method.

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