DESIGNTRAIN CONGRESS TRAILER II
PROCEEDINGS

DESIGNing DESIGN EDUCATION

PART III
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## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Page</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>INTRODUCTION</td>
</tr>
<tr>
<td>9</td>
<td>FROM POETICS TO TOPOLOGY: PATHS TO DESIGN INSPIRATION</td>
</tr>
<tr>
<td>22</td>
<td>CONFLICTS in SCALE, CONFLICTS in PROFESSION</td>
</tr>
<tr>
<td>34</td>
<td>BEGINNING FROM THE BEGINNING The Dynamic Character of Beginning Design Education</td>
</tr>
<tr>
<td>45</td>
<td>SYNCHRONIZING OF MENTAL ABILITIES</td>
</tr>
<tr>
<td>61</td>
<td>AN IMAGINARY FIRST YEAR DESIGN COURSE</td>
</tr>
<tr>
<td>70</td>
<td>FOOTLOOSE</td>
</tr>
<tr>
<td>80</td>
<td>STRUCTURING THE FIRST YEAR DESIGN STUDIO</td>
</tr>
<tr>
<td>92</td>
<td>EFFECTS OF PREJUDICE IN FIRST YEAR ARCHITECTURAL BASIC DESIGN STUDIO</td>
</tr>
<tr>
<td>100</td>
<td>A METHOD ON BASIC DESIGN EDUCATION</td>
</tr>
<tr>
<td>107</td>
<td>A METHOD OF SHAPING FORMS FOR INTERIORS</td>
</tr>
<tr>
<td>115</td>
<td>RETHINKING &quot;LITTLE NARRATIVES&quot;IN DESIGN EDUCATION</td>
</tr>
<tr>
<td>127</td>
<td>CREATING AWARENESS IN INTERIOR DESIGN EDUCATION</td>
</tr>
<tr>
<td>135</td>
<td>AN EXPERIENTIAL LEARNING JOURNEY: BASIC DESIGN STUDIO OF THE NOVICE THROUGH A MODEL OF INCOMPETENCE</td>
</tr>
<tr>
<td>147</td>
<td>THE BURDEN OF BEGINNING: UNDERSTANDING THE MIND</td>
</tr>
<tr>
<td>160</td>
<td>ONCE UPON A TIME, THERE WAS A STORY IN THE NAME OF DESIGN</td>
</tr>
<tr>
<td>183</td>
<td>CREATIVE DRAMA; AN ALTERNATIVE IN ARCHITECTURAL EDUCATION</td>
</tr>
<tr>
<td>200</td>
<td>INVESTIGATION OF CULTURAL AFFECTS ON DESIGN EDUCATION</td>
</tr>
<tr>
<td>212</td>
<td>MODEL SUGGESTION RELATED TO BASIC DESIGN COURSE IN ARCHITECTURAL EDUCATION</td>
</tr>
<tr>
<td>227</td>
<td>TURKISH STUDENTS’ FIRST EXPERIENCES IN DESIGN EDUCATION</td>
</tr>
</tbody>
</table>
INTRODUCTION

Welcome to DESIGNTRAIN…

Dear participants,

I would like to welcome you all to our second DESIGNTRAIN congress in Amsterdam, The Netherlands.

The DESIGNTRAIN Congresses are organised by DESIGNTRAIN, a project named as; “Training Tools for Developing Design Education” and is supported by European Commission, Leonardo da Vinci Programme.

The DESIGNTRAIN Project started in October 2006 and will end in the end of 2008.

The core of the DESIGNTRAIN Project idea is based on the adaptation problems experienced by the students/design students who have studied in their present education system, when they focus on the process of design. The DESIGNTRAIN Project has double goals and is composed of two stages thereof. The goal of the first stage is to test and develop skills for the pro-professions and the goal of the second stage is to orient design students to design thinking and improve their problem solving capacities by way of conducive exercises. The far-reaching goal of the project is to render the process of design education feasible and economic in terms of using human resources.

In the aim of these two main bases, the first DESIGNTRAIN Congress; Trailer I: “Guidance in/for Design Training” was organized in May 2007, which targeted self-evaluation and design orientation tools for future design students, and now we are here for the second DESIGNTRAIN Congress; Trailer II: “DESIGNing DESIGN EDUCATION”.

The aim of this second congress: DESIGNTRAIN Congress; Trailer-II; “DESIGNing DESIGN EDUCATION” is to search alternative ways to discuss whether there can be some supporting modules in teaching and understanding the rapidly changing design language and/or design education, in the process of first year design education. Our aim as the DESIGNTRAIN Team is to get retrieval of information related to design and to analyse the design concepts again to make them more accessible, fast, easy and user-friendly for the first year design students.

As we all know that, the public view on the role of architecture is more and more affecting the approach and the design education of students of environmental, architectural and interior design. Motivation, engagement and knowledge of younger students seem to experience a deep reconfiguration
phase. The first year education process can be considered as the start of a training process and consequentially a confrontation of the students in design studios.

The matter finds a strategic evaluation and re-thinking moment in the first year education process and it might be discussed starting from that very harsh confrontation that take place in design studios.

That's why we ask, how can architectural education approach in a positive way the energy for better and various human urban models and designs to get more attraction for skilled and motivated students?

In general the first year students in schools of architecture are not prepared for studying the curriculum in a systematic way. Moreover students have different learning styles individually. The way to motivate the beginners, to make them open for creativity, phantasm and responsible planning should be discussed. Since, there are numerous methods of education, especially in the basic fields of architecture like design theories and practice, fundamentals of technical construction and art & architectural history, each school of architecture will lay claim to its special way and success, but what are the future guidelines in a globalizing world that is in control of economic structures?

Design might be considered as an instrument and a medium of expression, a kind of international language; or as a non-neutral actor that internationally tries to equalize taste, needs, as the modern building structures disregards national, regional and local culture and behaviour. The awareness of such facts is indeed very important in teaching and learning, both for academicians and students, not only in universities but also in high schools and secondary schools.

The congress now accentuates this global effect and also the protection of the individual characters of design education and practice.

Although, design is a kind of international language, learning and adaptation process to this language of students can not be standardized at ease, since the students have different tendencies to disparate learning styles. Moreover standards and characteristics of schools are different as well. Also the concerns of the first year design education might differ according to regional demands and culture as well as the methods of teaching.

Sharing those methods are now challenging in the “DESIGNTRAIN Congress; Trailer II: DESIGNing DESIGN EDUCATION”. The congress now also helps and demonstrates new thinking and experimenting in this large field.
According to these, we tried to have some titles that best exemplifies the approaches in finding some solutions to our main problem. These are:

- Experiencing First Year Design Education: Activities and Impressions:
  - First Experiences: Open Day - Get together, First Day, First Tasks, First Actions
  - Team Working: Basic Exercises
  - Enjoying First Year Design Education: Ability and Motivation
  - Ways of Thinking in Design Education versus Methods of Teaching
  - Intuitive Thinking versus Rationale Teaching: Creativity and Problem Solving
  - Experimental Learning: Reflection in Action – Reflection on Action
  - Explicit versus Tacit Knowledge
  - Communication in First Year Design Education: Cooperation, Presentation and Expression
- Team Work - Self Learning
- Foreign Language Training, Intercultural Communication
- Graphical Presentations and Verbal Expressions
- Supporting First Year Design Education: Contribution by Cooperation and Networking
- Comprehending First Year Design Education: Scopes, Courses and Lectures
- Notion of Scale and Proportion / Perception of Space, Experiencing Space
- Technical Drawing, CAD Programs / Understanding Human Needs
- Dreaming First Year Design Education: Utopias, Expectations and Reality
- Study Motivation before and after First Year
- Basics and Superstructure – How to Continue in the Next Years
- Close to or Far Away – Fantasy and Reality Conflicts
- Self Confidence – Critics and Evaluation
We received over a hundred abstracts for this aim, and selected 65 original papers from different countries all over the world, from Europe, Asia and USA.

It is a great pleasure for me to thank to those who supported us in making this event to an unforgettable one. First the keynoters - Bryan Lawson from the University of Sheffield, UK, Alexandros N. Tombazis from Greece and Sengul Oymen Gur from the Karadeniz Technical University, Turkey. Also I would like to thank the DESIGNTRAIN Project partners and their representatives - Heiner Krumlinde from Hochschule Bochum, Germany, Manfredo Manfredini from Politecnico Di Milano, Italy, Nazan Kirici from Gazi University, Turkey, Joost Lanshage from the European League of Institutes of the Arts, The Netherlands and my dear colleagues Nilgun Kuloglu and Ali Asasoglu from Karadeniz Technical University, Turkey, this great job would not have been possible without your help.

I would like to express my deepest gratitude to Iakovos Potamianos from the University of Thessaloniki, Greece, Frances Hsu from Georgia Institute of Technology, USA and Greg Watson from Mississippi State University, USA for all their help and contributions.

I’d like to thank to you all, the DESIGNTRAIN Congress; Trailer II participants, for realizing this important event by sharing your valuable knowledge.

On behalf of the DESIGNTRAIN Congress; Trailer II organizing committee,

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FROM POETICS TO TOPOLOGY: PATHS TO DESIGN INSPIRATION.

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Research interests

1. Methods of exerting psychological influence in religious monuments. 
   Light in the Byzantine Church, book, in Greek, 2000
   Art and Mysticism, book, participation, in Greek, 2002
   Papers on the geometry, orientation, and lighting methods of religious monuments.

2. Relation of diverse aspects of human endeavor to the design disciplines
   Papers on design education in relation to physics, mathematics, aesthetics, and art psychology.

3. Translation of books into Greek
   by late Rudolf Arnheim (Ph.D. thesis advisor) on art psychology.
   Art and Visual Perception, 1999
   The Dynamics of Architectural Form, 2003
   Entropy and Art, 2003
   Visual Thinking, 2007

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ABSTRACT

Poetry can carry man into a realm of heightened consciousness and feeling. Through image, sound, and rhythm can influence man’s spiritual balance and direct his psychic energy. In recent years Martin Heidegger reflected on the idea that “Poetically Man Dwells” on this earth and that it is this kind of dwelling that must first take place before any other becomes possible. Etienne Louis Boullée, in his Essay on Art of the 18th century, suggests that “buildings must to some extent be poems”. A study of the processes in which poetry attained its impact in ancient tragedy written by Aristotle in 4th century B.C. has been handed down to us in his Poetics. The visual and spatial impact of poetics has been studied by 20th century intellectuals from various standpoints. Concurrently, Wolfgang Köhler reached the conclusion that similar principles govern creative thinking across boundaries of human activity in the arts or sciences. Such generally valid principles may be found in fields that range from the making of poetry, to perceptual processes in psychology and the formation of topological theorems in mathematics. Despite their diverse origin they seem to share common threads that may be turned into paths of inspiration for artistic creation. For this reason it has been attempted to introduce such principles in the design studio and experiment with their potential outcome and applications. Some of the principles that have been explored are those of action, reversal, continuity, function, isomorphism, and boundary. Each of these seems to have produced interesting and unexpected results.

Keywords: Poetics, Topology, Design, Dwelling, Inspiration.
Introduction
It appears that in the sphere of art it is necessary for the artist or designer to move comfortably within the realm of feelings both in being sensitized to their slightest variations and handling comfortably the ways in which these may be envisioned and organized. Only then will he compose works of art that will incorporate powerful experiential qualities that might have an effect on human existence, on the inner world of man. In this sense, approaching the realm of feeling becomes a priority in all art and precedes the specific workings of any specific artistic discipline. Composition of feelings precedes formal, color or spatial composition. These latter aspects then become vehicles to a purposeful experiential adventure which may have a deep and lasting effect on the psyche. Architecture is no exception to this, but often because of a prevalent confusion about its aims with utility or practicality it appears that such concerns are secondary or marginal. In short, it is less evident that feeling and experiential issues should constitute the principal aim in architecture as they do in fact in any other art such as painting, sculpture, dance, theater, or cinematography. As a result, several architectural curriculums are organized around issues that may seem more real and fundamental based on the assumption that there are practical needs to be fulfilled such as structure, functionality, protection from the elements of nature, social responsibility, the relation to the context, ecological consciousness, and so on, while any pursuit related to feelings is thought of as a desirable additional element, as beautification, as the glazing on the cake.
To be sure, there have been artists and architects who have specifically emphasized feeling as the only or exceptionally important reality with which art and architecture ought to be occupied, namely, Ettiene Louis Boullée, Kazimir Malevich, Johannes Itten, Louis I. Kahn, but also intellectuals coming from a different point of view asserting that the sense of dwelling first resides in feeling before it acquires form, namely Martin Heidegger, Hölderlin, Susanne Langer, and others.
Based on these thoughts my contention is that a design fundamentals course should be based on issues of feeling and the possible ways of approaching and deriving feeling both analytically and synthetically. The first year of design education should not get the students involved with specifically architectural problems because if it does it introduces by necessity a multiplicity of factors without prioritizing them. The result may not be anything but confusion. If there is agreement that the union of the arts stems from the firm basis of feeling and experience then a design fundamentals course should begin with ways of approaching them. Toward this aim I propose two possible paths that may help students both to understand and be inspired by. The first path comes from philosophy and
Poetics
Poetics is a branch of philosophy that deals with the various aspects of the poetic process in the creative disciplines and the manner in which this process affects the human psyche. Aristotle distinguishes poetics from theoretical and practical philosophy. Theoretical philosophy is occupied with knowledge, reality, and the being while practical philosophy with the attainment of happiness and with moral issues. Poetic philosophy, on the other hand, is concerned with the investigation of poetry that derives etymologically from “poiein” which means to make, construct, or create (Webster’s, lemma: poet). Poetic operations differ from all other human activities, dealt with by the other two branches of philosophy, in that they seek to make things that do not exist in nature, which is the realm of the practical arts, or that they simulate nature, which is the realm of the fine arts. Although the ideas of what constitutes a practical art or of a fine art creation as a simulation of nature have been superseded since Aristotelian times the general categorization still holds. Moreover, Aristotle, in stark opposition to Plato, thinks highly of poetry and declares that poetry is more philosophical than history because in opposition to history, that studies particular facts which have taken place in a certain time and place, poetry aims at revealing universal patterns (Aristotle, 1541b, p. 54.), i.e., general ideas that surpass and comprise history.
Consequently, according to Aristotle, anything artificial created, envisioned, formed and made by man belongs in the realm of poetic philosophy. In this sense, all fine arts and the design disciplines fall within this same category. In this sense, the study of principles that have been observed to govern the making of a thing, the conception of an imaginative idea, the perception of an idea in a thing, or the manner in which a feeling arises and the psyche is affected by an artificial situation are of crucial importance. In short, any process observed regarding poetic operations is of interest to design instructors. Are there any such processes of universal application to all art and design disciplines? If such processes existed would that mean that they would point to a right way of doing things? The answer to this should be, and is, negative. Processes of this kind are not of a particular but of a general nature thus they may only be related to a student as generalities or potentialities, as paths of inspiration rather than as correct procedures.
Poetics is not the making of poetry itself but rather an analytical approach to general ways or paths potentially used in the creative arts in order to affect the human psyche. It studies the principles according to which a process of artistic creation may be organized in view of its specific purpose. One could possibly conceive it as the reasons, ways, and methods of artistic making, all
in all, as the architectonics of art; as if all art were in union. If poetics is the philosophy of artistic making then there could be many widely differing forms of poetry and poetic expression in the sense that they may touch the innermost psychic chords through diverse sensorial and emotive routes. Each form of art seems to display its peak of power in its peculiar medium and affect those that have developed a particular sensitivity to this particular form. From the point of view of the creator it is the will to form that must be present before any specific medium is chosen. If one selected as a start the visual artistic medium then one should experiment with various aspects of it before he moved more specifically into painting, sculpture, architecture etc. Although architecture, for instance, may be a medium with its particular properties and peculiarities, most design principles are to a considerable extent common with other media. This was well understood by early 20th century teachers when they set up basic design courses (Itten, 1975). Poetry can carry man into a realm of heightened consciousness and feeling. Through image, sound, and rhythm it can influence man’s spiritual balance and direct his psychic energy. In recent years Martin Heidegger reflecting on the idea, expressed in one of Hölderlin’s poems, that “Poetically Man Dwells” on this earth and that it is this kind of dwelling that must first take place before any other becomes possible he placed architecture right in the heart of poetic philosophy (Heidegger, 1971, p.213ff). The 18th century visionary architect Etienne Louis Boullée, suggested that “buildings must to some extent be poems”. Reflecting on nature and its seasons and attempting to relate the impressions each produces to a suitable kind of architecture he reaches a poetics of architecture and his great discovery which he calls “the architecture of shadows” (Rosenau, 1953, p.90). More philosophical in its aims is Aristotle’s Poetics, of 4th century B.C., a work among several of his dealing with this subject, parts of which are explored in this paper. Although such works may appear quite different at first sight they seem to share some deeper similarities, ways of relating things that form common threads. Perhaps this is due to the conclusion reached by Wolfgang Köhler, one of the pioneers of Gestalt psychology, that similar principles govern creative thinking across boundaries of human activity (Henle, 1971, p. 239). I will refer here to two concepts among many found in Aristotle’s Poetics, namely, “action” and “reversal”. These two concepts have been singled out because of the generality of their nature on the one hand and of their potentially immediate relevance to other works of visual art on the other. They have been presented to students in order to explore the range of their applicability to design problems. Although these two concepts might be investigated in various ways, specific instruction was given to the students to explore their expressive potential.
Action
An action in tragedy is the deed of a character engaged in it because of a certain need aroused in him and his particular disposition which impels him to undertake such an action in order to fulfill this need. His disposition is of the essence regarding the kind of action he chooses to undertake. This action is only one of several that compose the tragic plot. Any action is independent to a certain extent but it is so placed so as to serve or reinforce the ultimate tragic goal. These are some fundamental qualities of an action in the poetic form of tragedy.

What might be the relevance of these qualities to a visual composition? An important factor is the unity of the action. It is performed by a single entity so that it is not only infused by a distinct character but it is imbued with a sense of independence and uniqueness. No matter to what degree it may have been affected by other actions and surrounding circumstances it retains marks of its unique identity. Furthermore, each action is by virtue of its character imbued with certain expressive properties and it is those that are of particular interest here; not so much what it does, which might refer to a utilitarian, practical, or pragmatic aspect but how it does it, which refers to a particular expressive attitude, a certain expressive identity.

For instance, let us suppose that in the composition of a teapot the designer wishes to provide the action of dispensing with a certain expressive attribute; the teapot is to dispense tea *gracefully* into the teacup. This gesture must be experimented with in order to develop a sense of the ways in which a graceful character may be imparted. Among the several ways that might be invented the one picked will be based on the manner chosen by the plot or the scheme of the composition. This manner might be *melodious* in which case the action chosen should be conforming to the overall melody; it might be *contrapuntal* in which case a certain opposition to rhythmical occurrence or to shape occurrence might be necessary. In still another instance the designer may opt for an *explosive collision* in which case the antithetical rhythmical occurrence might not be enough. The antithesis should be as explosive and sudden both in shape and in void, etc.

All of the above examples refer to expressive attributes of functional wholes rather than of local elements. These expressive attributes refer to the whole of the action rather than to small parts of it. An action develops over a time period or over a space interval and during its development acquires its particular expressive characteristics. As Köhler puts it, a melody has a "minor" and a "major" character as a melody, that is, as an auditory whole. No matter how long we investigate the tones of the melody separately we will be unable to find a "minor" or "major" character in them. This character belongs to the whole alone which develops over time. The same happens in space. Attributes such as "Regularity", "smoothness", "angularity",
slenderness” are expressive tendencies developed by lines, curves or figures over space (Henle, 1971, p. 241).

Reversal
The concept of reversal or “peripeteia” described by Aristotle (Aristotle, 1452b, p. 56) is a situation in which a certain action brings about the reverse outcome than the one expected. In this sense it constitutes a complete overthrow. The action which reaches reversal or is subjected to reversal must have a clearly defined goal, in the first place. It is this goal which is being overthrown, reversed because of which a surprise is caused, puzzlement, dilemma, estrangement, or uncomfortable feelings. Etymologically the word “peripeteia” is equivalent to “fall in with” or “fall into” a condition or situation. It means not to move intentionally toward a situation but to arrive at it unexpectedly, suddenly, abruptly. The reversal starts as something and ends up as something completely different. Something unstable ends up as something stable. It contains a continuous reversal. It contains duration so that during its evolution, which becomes evident in its form, reversal turns up.

Seeking the particular nature of “peripeteia” as a potentiality in a visual object we must first attempt to reach it as a generality of meaning. What is the true meaning of a reversal? Something is turned upside down. Does this constitute a change? It depends. It must bring about not only the reversal of a form in space because most probably this can be compensated by a rotation of the visual field. In essence, what is discussed here is a reversal of feelings, a reversal of what one thinks as his world, a reversal of what one considers as familiar, as one’s own, pulling the rug under one’s feet, a complete shake up. Can a designed thing do that?

This far-reaching questioning, critiquing and overthrowing of one’s assumptions is what the philosophy of deconstruction is all about but is it something that can be even thought out with any clarity? Can be done synthetically or perhaps only analytically? How can a teapot, for instance, provide a reversal in what the idea of dispensing stands for which may make one realize what he assumed dispensing was up until now? And what would it mean for the idea of dispensing to be reversed? And what for? How might one be inspired by that?

I shall attempt to follow a potential path of inspiration. Let us suppose that dispensing means that I already have something which is my own and which I hold in a certain way which I then wish to dispense to someone in a certain way. What is important here is the manner in which I think I have something, the manner in which I hold it and the manner in which I want to dispense it. If, for instance, I am a person that has newly come into money I would think that this something is precious therefore it should be put into a teapot which pinpoints to its value by its unique material or complex shape. It is
unquestionably mine and thereby the teapot should pinpoint to that fact that it would allow me to get a firm grip of it and handle it with an air of self-assurance. In the same vein, dispensing would become an act of generous and perhaps condescending giving to someone perhaps not as lucky as I. Quite contrary to this would be a situation in which one is thought of himself as an environmentally conscious individual who would think that what he has is precious not because it belongs to him but because he was allowed to use it by mother earth through a difficult and complex process of creation. The thing is not mine and not easy to hold or get a grip of but it requires care and gentleness and it needs a special effort to handle. Finally, dispensing is not generous but takes time, effort and special attention pinpointing to the nature of its value.

Both of the above teapots require certain actions from an expressive-poetic point of view to be composed into a final synthesis. The two correspond to antithetical outlooks. However, there is no sign of reversal among the two until the first turns out to be the second. Only then a sudden realization may occur.

These are some potential paths the mind may follow in creating objects or spaces. These paths may be enriched through the study of dream imagery and of archetypes (Jung, 1964). Also they seem to be certain aspects in the behavior of the senses that may be exploited in order to achieve desired expressions through not very obvious ways.

**Topology and Perception**

“Topology” is a rather recently formed and developed branch of mathematics which I have referred to in an article of last year’s DesignTrain Congress meeting. The reason for resorting to such a specialized field of interest to seek paths for design inspiration would appear surprising if it were not for the observations in perceptual psychology that assured us that all perceptual operations are of a topological nature (Arnheim, 1997, p.75ff). The philosopher Ernst Cassirer also concurs in that in perception metric space derives and is gradually abstracted from topological space, which is based on relations of things to the body and among themselves (Cassirer, 1985, p.422). This being the case, topology acquires a special importance to the art and design professions and it would only be logical that students should become familiar with the relational structure of all visual percepts and the system of concepts that this structure is governed by.

**Isomorphism**

Isomorphism is a term coined by Gestalt psychologists which refers to the similarity of the structural characteristics of brain processes and the related phenomenal events (Henle, 1971, p.80-1) or, more clearly, the structural kinship of the stimulus pattern and the expression it conveys (Arnheim,
1974, p. 63, 450). This means that expression is embedded in form and perception accesses this expression first before reaching a complete comprehension of the form, or pattern. At the same time this expression is perceived as a sense of the thing that exerts an influence to all our senses which is of a general nature so that expressions derived from diverse visual aspects or even diverse sensorial routes may become functionally related or even interchangeable.

Along this vein the painter Wassily Kandinsky attempted to relate diverse stimulus patterns according to the similarity of expression they conveyed. Thus he related, for instance, acuteness to tension, to triangle, to yellow, because although differing as visual aspects they conveyed a similarity of expression (Lindsay, 1994, p. 591) these he related also to non visual aspects such as the psychological tension experienced by an artist during the process of working on a piece of art (Lindsay, 1994, p. 588). This principle is of a very general nature and transcends any specific sensory apparatus. The sense of acuteness may be derived, through the visual observation of a shape or color, the auditory sensation of a sound, or the olfactory sensation of a smell and all three sensations different as they may be share something in common that places them within the same category. It is this principle of isomorphism that a student will resort to when asked to translate a piece of music or a poem into a formal or spatial composition or a textual description of feelings into dance movements.

**Function and Homeomorphism**

Strangely enough the principle of isomorphism may be directly related to the topological concept of “function” and “homeomorphism”. Among the many concepts found in topology we will discuss here those of function, homeomorphism and boundary not because they are more important than others but because they correspond to concepts that are quite removed than those we are used to describing by these words.

“Function” from a topological space to another is a correspondence of the elements of the one to the elements of the other (Mendelson, 1990, p.43, 87). The topological concept of function operates only toward one direction. Extrapolating this concept to the realm of art, in the example presented in the figures below the forms and colors of Van Gogh’s “Potato Eaters” refer to the potato. In this sense, Figure 2 is a function of Figure 1. The function cannot be inversed. The dimension here is not metric but is the potato-quality.
“Homeomorphism” exists between two topological spaces where inverse functions are valid as well (Mendelson, 1990, p.90). Although, this concept comes from mathematics appears to be very similar to isomorphism which is derived from observations on perceptual and brain processes, as mentioned above. Numerous homeomorphic concepts are found in Kandinsky (Figure 3). The dimension here duration-size and the function can be inversed.
Another topological concept of great interest is that of “boundary”. A boundary in the topological sense is quite different than its meaning in common language. The elements that belong to a certain set but also to belong to its complementary set are said to form a boundary (Mendelson, 1990, p.85). In this sense, such elements do not form some sense of a barrier or limit between the two spaces but rather a condition of belonging to two opposing fields. The elements do not form a shell which separates the inside from the outside but are found between two magnetic fields, as it were, in a tug of war torn between two conditions. The handling of a topological boundary, in this sense, is quite a different undertaking from an art point of view especially if one is reminded that the quality or dimension in terms of which this boundary ought to be conceived is anything but metric. This dimension may be understood as any kind of quality or feeling other than metric.

Results
Attempting to teach such principles to art and design students is not an easy task. Philosophical or mathematical concepts must be translated into simplified examples and imagery in order to be grasped. Often, it is this imagery which the brain of the student is attached to, rendering it hard for the underlying concept to pass through to him. A few students stand up to the challenge. They try time and again attempting to delve deeper into the workings of each concept looking at it as a more meaningful endeavor. They are either art or architecture students. They strive to grasp the concepts.
either in painted shapes, or in collages, or simple color and line schemes, or in models. Any visual means is acceptable.

Figure 4. Eirini Dapoulaki. Exploration of the topological concept of “boundary”. Experimentation with the dimension of “passion”.

Figure 5. Lili Tsolakidi. “Actions” composed into a pitcher, 2007
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CONFLICTS in SCALE, CONFLICTS in PROFESSION

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ABSTRACT

According to the higher education policies in Turkey, education in Architectural Faculties is driven by departments of Architecture, Urban Planning, Landscape architecture, Interior architecture and Industrial design. Every department set its own design education program separately according to their objectives and priorities.

Architecture and Urban planning programs have some similarities in their education approach in the first year to give the students dimension and space conscious, design understanding and history of arts / architecture. In urban planning, the main aim is to teach students how to understand the urban space in different levels: spatial, historical, social and economical. While focusing on the spatial level, different reading and designing techniques have used for supporting creativity. First year education in urban planning gives the approach to urban space and makes the basic steps for creativity and design. However, design dimension pulled to a secondary role in further years as a result of an understanding that, urban planning has a higher scale approach that focuses on economic, social and cultural developments in cities / regions. With this understanding urban design scale becomes a fuzzy area on intersection between urban planning and architecture. Architecture education focuses on building scale and urban planning education focuses on conceptual approaches and higher scale. Urban design profession considered as a specialization after BA degree. However, refractions on design education and understanding since first year cause serious problems on design / creativity ability. As a result, urban design understanding and practices have influences of these conflicts also in professional life.

The aim of the paper is to discuss the conflicts in scales between architecture and urban planning; and how this conflicts influence design education and understanding. The paper stresses the importance of design both in architecture and urban planning as two major professions dealing with creating spaces for living; and discusses the ways for a sustainable design approach in education for all semesters in four year programs that would support the creativity and space / place conscious of students.

Keywords: urban planning, urban design, design education
Introduction
Architect of the Modern age was the designer for all scales, from industrial design scale to city scale; the one who decides for best solutions for people and for environment. The outcome of this approach was urban environments with huge blocks on the middle of wide green areas connected with highways. Human scale, perception and social components were not considered as a part or an input for design process. With the critics to this understanding new approaches started to develop with a focus of users’ perception to their space. To be able to design the efficient space for people, the first step was to define what good space is. The main idea was to answer people’s needs with understanding them. Different professions became a part of this process, it has been understood that the urban space has a lot of dimensions and should be analyzed by different disciplines.

Urban space is not just a physical space; it is a social space with its physiological and economic dimensions as well as design issues. Specializations have started in every discipline and urban space became the case of a multidisciplinary work. On the same period the working scales of architecture have started to redefine according to new specializations. Urban planning, architecture, interior design and industrial design define their professional working areas according to the needs and economic developments in the world.

With globalization the importance of cities became more important. Cities are the new centers on the globe instead of countries. In this new situation an important competition started between cities to drag more attraction / investment and people. The quality of the conditions that a city offers both for residents and foreigners have became the most important thing.

Considering today’s cities, experiences in the urban space and the quality of living gains more importance. Especially in big cities city life has a different flow with many connections on different digital and physical networks. Constructed areas of urban tissue are spreading out and the borders of cities are getting fuzzy. In this large organism cities have to be well designed to answer residents’ needs of living, working and recreation. Distributions of the functions, connections and services, as well as business have to be well organized and managed in the urban environment for a livable city.

In this point, Urban Design comes into prominence. With its design approach and working scale urban design provides interdisciplinary solutions for urban environment problems. Designing scales and operation area are in the intersection area of architecture and urban planning. In this context urban designer is a professional that should have both architecture and urban
planning knowledge and understanding. The most important thing is the balance between creativity and management. Urban designer should understand the upper scale information coming from master plans and combine / realize it with design in application scales for daily urban activities. Even this identification underlines the importance of creativity and ability of design in itself.

The paper aims to develop a critical approach in design education in urban planning in Turkey, in this sense it is important to see the formal developing process of architecture education in Turkey.

**Architecture and Urban Planning Education in Turkey**

The education of Architecture in Turkey in the means of western definitions starts in 1883. Osman Hamdi founds the first fine arts school of Ottoman Empire in 1882 and the school starts to give architecture education in 1883 with the influences of *École des Beaux-Arts*. The name of the school became States Fine Arts Academy in 1928 and finally Mimar Sinan Fine Arts University in 2004. The Engineering School of 1909, turns to Istanbul Technical University in 1944 and starts to give architecture education with the influence of German technical university model under the Faculty of Architecture (Dostoglu, 2005). Yildiz Technical school (today’s Yildiz Technical University) in 1942, Middle East Technical University in 1956 and Karadeniz Technical University in 1963 follows the architecture education. With the foundation of Commission of Higher Education in 1980 the format and structure of higher education standardized and redefined.

First Urban Planning department founded in 1982 in Mimar Sinan Fine Arts University and started to give BA degree, followed by Istanbul Technical University in 1983.

**Conflicts in Education**

To collect data for this paper, 5 curriculums of Department of Urban and Regional planning are studied that belongs to 4 Turkish Universities: Istanbul Technical University - ITU, Mimar Sinan Fine Arts University – MSGSU (Istanbul), Middle East Technical University – METU (Ankara), Karadeniz Technical University – KTU (Trabzon) and Dokuz Eylul University – DEU (Izmir). However, main discussion is made on the programs and experiences in Mimar Sinan Fine Arts University (MSGSU).

Architecture is roughly defined as the profession of creating spaces. The focus is the physical spaces for a living environment. All the necessary information of drawing techniques, materials, construction techniques, ergonomics and standards are given to students through theoretical courses.
and studios. This first part can be considered as design related course. These lectures help students develop 3D perception, understanding of physical space and creativity. Second group lectures contain more theoretical part mostly history of architecture, new approaches of renovation, construction management etc.

Architecture students take urban design studios in the last year of their education. The studio leads by the department of urban planning. Even though the education of architecture is strong in developing design skills, students have problems designing in upper scales. Defining problems concerning social and economical needs, designing in urban space with connections to the surroundings, regulations coming from master plans are the major problems that have been lived in the studios. On the other hand in their last year students are also taking graduation project which is has a priority, so their gaining from urban design studios is less in the comparison of their attention to it. Even if all the architects work and make projects in urban space in their professional life, education program puts urban scale subject in a second place.

To make a comparison it is better so see curriculums and distribution of lectures related to design in whole education plan both for Architecture and Urban Planning (Figure 1 and Figure 2). The detailed education programs of the departments are presented in the Annex.

The rates are calculated from the ECTS credits of lectures and total year credits of 30 ECTS. Design related lectures are chosen according to their curriculums that teaches design ability, creativity, development of 3D perception, drawing and spatial understanding.
Figure 1 Distribution of lectures related to design in the education of Architecture curriculum (MSGSU).

Figure 2 Distribution of lectures related to design in the education of Urban Planning curriculum (MSGSU).

Architecture students have the problem of working on higher scales like 1/5000, 1/2000 and 1/1000 and also having conceptualizing problems in complex urban system. On the other hand Urban Planning students have the
problem of working on lower scales like 1/2000, 1/1000 and 1/500 and cannot visualize and understand physical space and effects of volume.

As in urban design profession, urban designer should be the person who can follow the master plan regulations and social, economical needs of the area as well as the problems in physical space and creates solutions with a team of architects, planners and designers. This situation requires high level of understanding the physical space. Urban designer have to realize the conceptual decisions of master plans in the everyday life scale in urban life. In this context design and creativity tools in the education of Urban planning decreases after 3rd year. In 3rd year conceptual lectures get more importance, even in the planning studio with social and economical aspects are focused. Until the master degree students lose their ability and understanding of design and sense of third dimension.

**Figure 3** ITU, Istanbul  
**Figure 4** METU, Ankara  
**Figure 5** KTU, Trabzon  
**Figure 6** DEU, Izmir

**Figure 3,4,5,6** Distribution of lectures related to design in the education of Urban Planning curriculum in ITU, METU, KTU and DEU.

**Conflicts in Profession**
After graduation, urban planning students who start their professional careers in planning offices or municipalities realize that urban planning is directly concerned on physical space and physical plans. Social and
economical planning is an essential part but success is to realize the conceptual decisions of upper scales on the ground. And make it a real part of citizens’ everyday urban experience. To focus and work on this subject most of these professionals apply to have urban design master degrees or start to learn related computer programs.

New graduated architects who star their professional lives in offices who work on urban scale projects realize a similar problem of lack of understanding urban scale. But in the end, urban design became the area of conflict and confusion for both of the professions. The fuzzy area on the intersection of architecture and urban planning should be defined more specifically and approaches should take place in the education programs with more clear steps.

Some conclusions can be made from the current curriculums of Architecture and Urban Planning for future developments to clear away these conflicts:

Perception of Third dimension in Urban Space is very important for both professions. Architecture education has more input on this subject but urban planning education only has some components in first year education related to this topic. Architecture have to develop its approach on city scale, at least on urban interface and street scale, on the other hand urban planning should support its approach to give perception of volume in urban scale.

Perception of Social Space, Social and Economical Aspects, is accepted as the area of urban planning however architects should make connections with the social and cultural environment while designing and constructing in the city. Urban space is a social space. The connections and relations in it should be analyzed well in order to have livable spaces. On the other hand urban planners should be capable on defining and organizing these relations, but they have to be aware of the behavioral settings and physical reflections or codes of social inputs. Education can be improved on reading the physical-social relations on urban space in different scales.

Ability of Teamwork gets more important in today’s professional life in every discipline. Especially cities are the laboratories of different areas with their complex structure. Architects, urban planners, engineers, economists, sociologist, artists and designers work for a healthy city. In this context all these specialists have to develop their skills of team work. Urban planning education mostly continues with group works or workshops, students have time to develop their skills in this subject. On the other hand architecture students mostly work alone, and have troubles in team works. Team working gives participants ability to describe their own ideas, and understand others’,
develops communication skills, gives the conscious to be a part of a group, working discipline, sense of responsibility. With multidisciplinary groups students can gain a wider perspective to the topics with the effects of other members and their professions.

**Developing Creativity** is the most important part of education. The other most important thing is to make this development sustainable. First step is to support students with basic information on the subject, and second is to lead them think and create solutions by directing different questions on the subject. The key issue is to encourage them to solve these questions by drawings and schemes to be able to develop brain – hand contact. In years, the scale of the information and the questions should change and differ in order to achieve complex design thinking.

Urban planning has regulations defined by laws on every scale. The rights of citizens and public participation make things more complex. Focusing design education on regulations in planning has an effect of decreasing creativity. Students felt like restricted with all the rules. However regulations are mostly standards and creative thinking can find new solutions which fit the rules and have a high quality design at the same time.

Designing can be defined as a way of problem solving. There are two parts of it: first, the methodology of solving a problem; second designing creative solutions. Students need basic information of techniques and methodology in the first step of starting design. Methodology makes them define the right approach and define a useful route for the process. The success of the solutions depends of their ability, backgrounds and knowledge. But if they supported with information on different levels, the quality of the final design increase.

Last step of designing is to be able to finish the project as it is expected. Most of the students have ideas but having troubles to finalize it. They are having problems in visualizing the ideas and transform it to application plans. The solution is to support the education by adding design components in every year in a developing scale. And keep the contact with physical space and urban space. Especially in urban planning education Landscape planning, urban design and spatial analyzing techniques remained mostly in the introduction level. Students see a part but can not develop it with a further step. These design related courses should create a chain in the education process with strong links to each other in an order.
References:


Annex:
Curriculums of 4 years Education of Mimar Sinan Fine Arts University, Faculty of Architecture are added as annex. Design related lectures and studios marked with red. The column on the right of every semester has the ECTS credits of lectures.

Curriculum of Department of Architecture - MSGSU

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Curriculum of Department of Urban and Regional Planning - MSGSU

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BEGINNING FROM THE BEGINNING
The Dynamic Character of Beginning Design Education

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ABSTRACT
The significance of the first year is obvious even when we simply ask ourselves “Why don’t we feel the need to organize a congress on second or third year education?”. As in the case of a building, the foundation should be firm enough to carry the rest otherwise it collapses. But the process of designing the first year design education is much more complicated when compared to the building foundation, that’s why we keep on asking this “how to” question.

After working on any subject for more than two decades one may come to a point of saturation, however this can never happen in Beginning Design Education. One should keep questioning her/himself as the instructor and search for ways of updating the curriculum. That is the ‘pain’ and ‘joy’ of teaching beginners: one should begin from the scratch each and every year.

This paper/presentation aims to reveal the constants and variables of the beginning design education and demonstrate a collection of works representing different dimensions of change experienced throughout the years within a wide range. After mentioning the content- that is the basic concepts and principles of design- as the constant, the variables will be disclosed with reference to the structure, method, teaching staff, physical/social environment and context of the course(s).

The crucial role of the first year experience as a transition period will also be investigated in relation to the pedagogical issues and changing student profile with concrete examples. The thinking preferences and learning habits of students will be disclosed with reference to ‘The Four Quadrant Brain Model’ put forward by Ned Hermann. In addition to the objectives to be achieved by the end of the first year the transformation in the mindset and behaviour of the students will be discussed.

This paper/presentation is structured as if it is a “Basic Design assignment” and will claim that the first year design education can be designed according to the fundamental concepts and principles of design. By way of this misconception of Basic Design Course as a process of “cut and paste operation” will be criticized and its comprehension as a process of constituting the whole with the concern for the properties of the elements will be stressed. Consequently the paper will present the constants of the first year with an intense emphasis on its dynamic character, as in the case of a ‘variations on a theme’ exercise for the students.

Key words: Beginning design education, design principles, organization, thinking preferences and learning habits of the students.
BEGINNING FROM THE BEGINNING
The Dynamic Character of Beginning Design Education

“Pain” of beginning: Organization of the content

The ‘Basic Design’ teaching offers a system of thinking that enables one to maintain logical relations in between the elements of any given subject hence is applicable anywhere including the organization of a course. We can approach the problem of designing the first year design education as such and may attempt to solve this problem as if it is a “basic design assignment”; now the question is to make a multi-dimensional composition.

In order to achieve a successful composition the designer has to identify its elements and determine their properties carefully. S/he should organize these elements according to a generating agent in an orderly manner in such a way that the rules and principles are legible. Above all the composition needs to have a theme.

If we are after composing the Basic Design Course we can focus on its content as the main theme, and discuss different ways of introducing the fundamental topics as the variations on that theme. The main topics of the course can be stated as the types of organization, the conditions that facilitate perception, the properties of elements and the ordering principles of design; and these are constant. The variables in this respect come into the scene with modifications on the course outline; that is the change in the configuration of the course with respect to the order of the subjects to be introduced and consequently the assignments to be given throughout the year.

For any composition to be accomplished properly we need to begin with a scheme, known as ‘bubble diagram’ for design studies and this scheme usually calls for a generating agent. One of the constant topics may guide us in this respect: the types of organization’ can be referred when determining the general layout of the course. If any composition is expected to generate form a point, a line or a coordinate system, the course program can be prepared on a similar basis.

It is usually the ‘line’ that establishes the flow of subjects in conventional education systems. However the beginning design experience does not necessarily require a sequential system of learning in contrast to many other courses, even for those in the programmes of design schools. The only thing that goes along a line is the increase in the number of issues to be controlled. Still
there is room for a ‘linear organization’, which starts with two-dimensional exercises followed by relief work and terminates with three-dimensional ones until the conception of space comes into the agenda. The ‘ordering principles of design’ are repeated at each step with reference to previous exercises thus the students are provided a chance to think over the fundamental concepts at certain intervals.

We can organize the same course in such a way that the exercises can be designed around a ‘point’, where the concepts stand for the generating agent. Whenever we mention a composition that develops around a point, ‘centralized’ and/or ‘radial’ arrangement of elements occurs to the mind but we should beware of the plain use of this description since it may reduce the high level of conceptuality in “basic design” to mere visuality. As a matter of fact what we mean by ‘centralized organization’ here is related with the generating position of the concept as in the case of a point. One of the ‘ordering principles of design’ is selected and the type of relation between the elements of the compositions produced in different media is revised with consecutive exercises until the significance of these principles in spatial organization is clearly comprehended. Thus the students realize the translation of abstract concepts into real situations.

Neither the point nor the line simply by itself as the generating agent is enough to organize the beginning design course curriculum. ‘Coordinate system’, as a third agent for generating a composition is almost a must for introducing such a multi-dimensional system of thinking. The ordering principles of design: balance, contrast, harmony, repetition, dominance and hierarchy, each of which indicating one of the basic types of relations between the elements of a composition, the conditions that facilitate perception: similarity, proximity, continuity and closure, known as Gestalt principles, should be studied simultaneously. Therefore all the exercises no matter what the generating agent is should be designed to discuss the conditions for grouping the elements and their properties in a composition together with the ordering principles.

Organizing such a complex network of relations requires a tremendous effort to clearly distinguish the definition of certain concepts as they appear within different contexts. Therefore cross-references are of utmost importance and the exercises should be designed in such a way to avoid confusion and misconception.

If we are to give an example in this respect the multiple use of ‘line’ as a word can be mentioned. Line may be a generating agent to determine the location of elements in a composition so is the subject of ‘types of
organization’. It is used to maintain continuity thus should be studied within the context of ‘Gestalt Principles’. We refer to “invisible lines” while structuring the composition, consequently the significance of these lines are discussed in relation to the ‘ordering principles of design’. And finally linearity is stated as a ‘visual attribute’ of any design element. The miscellaneous use of each and every single word has to be clarified in the minds of the beginners while forming their professional vocabulary.

“Great expectations”: discovering the properties of elements
While making a composition, if we have the chance we can determine its elements; but if we have to work with the already given ones we should make a through analysis to discover their properties. The properties of the inanimate elements of any design product are obvious and explicable therefore can be managed more easily. On the other hand when approached as a ‘basic design problem’ the elements of the beginning design course are living beings. Therefore analysing the physical properties do not suffice to solve the problem; one should care for the personal characteristics of the students and try to discover their hidden dimensions. Similarly determining the teaching staff for the first year needs an extra concern to achieve a good composition.

In two or three-dimensional compositions the visual and topological properties of a single element can basically be studied with reference to size, shape/form, colour and texture, and position, orientation and visual inertia respectively. In the case of students, when supposed to be the elements of our composition, other attributes come into the scene. Among number of characteristics, personal and/or common, their changing learning habits appear as a significant tool to modify the course program.

The education method, which can be defined as “learning by doing”, is constant and the variations depend on the changing characteristics of each class. Both the class as a whole and the students constituting the class one by one should be analysed and recognized according to their learning habits and behaviour patterns.

It is a commonly agreed observation that the beginners in general are displaying similar symptoms of a memory-based education system rooted during the pre-university years. Knowledge is assessed by means of multiple-choice tests, which totally disregards the development of analytical mind. Manual and artistic skills are ignored; and parents provide no room for the maturation of their children. As a matter of fact the beginners are subject to a significant transformation that should be orchestrated by the teaching
staff of the first year. This needs to maintain the delicate balance between a motherly attitude and professional expertise.

When the relation between the teaching staff and the class as a whole is concerned ‘transformation’ is constant, however in each class different issues require different degrees of emphasis. The variables in this respect can be determined with reference to the expected achievements.

The memory-based system does not prepare the students for active participation in the course. The tendency to accept what the teacher says as the absolute truth results with a failure in design education. So if the majority of the students in a class are suffering from the consequences of ‘learning by doing’ method, lecturing more frequently and giving concrete examples may help. This does not mean to give up discussing on their own products and propose direct solutions to the given problems, but to explain how they can handle the process of design more explicitly. Still they are expected to be active participants rather than passive listeners.

Making research is underestimated during the secondary school years. This results with students waiting for ready information and if we are in front of a class as such the assignments should be designed to raise curiosity so to encourage them for exploration. Their fields of interest may be a remedy; therefore it is of utmost importance to follow the subjects up-to-the-minute in the world of the youngsters. Once they enjoy learning by themselves they may prefer exploration to ready information.

The most critical situation, which is at the same time the most common one, is the habit of attaining the correct answer by eliminating the wrong ones; that is the outcome of multiple-choice system. The design education, on the contrary is based on the multiplicity of solutions as well as authorities and this creates great confusion in the minds of the students. In order to break the illusion created by a single authority, but keeping on with the system they are accustomed number of instructors proposing different critics may help. Numbers of choices are offered but the students have to make the synthesis of what the authorities say. While discussing the alternatives both the illusion of ‘instructor as a hero/ine’ and the fallacy related with the singularity of the solution can be eliminated.

The beginners obsessed by the university exam, which does not tolerate any mistake, are not ready to take risks hence hesitate to produce until their ideas are fully approved. This is an impossible situation for design education. On the other hand, they are all successful students unable to endure failure. Especially at the beginning group works may have great
contribution for them to overcome the fear of design. They share the success and failure and do not feel humiliated hence gain the courage to produce even when they work individually. Forming balanced groups considering the personal traits of the members have positive reflection both on the product and the behaviours of the students.

The first year at the university is a period of transition during which the self-centred kids are expected to transform into self-confident individuals. The pedagogical approach of the teaching staff is of utmost importance; each and every student has to be recognized with his/her special characteristics and this takes time. So at the beginning we can concentrate on their thinking preferences and learning habits. Ned Herrmann’s “four-quadrant brain model” and the research by Edward and Monika Lumsdaine on “creative thinking” may cast light on our attempt to initiate understanding the students. Even though it is important to know each of them individually having a general idea on their preferences help to find out the different groups and appropriate the curriculum.

According to Herrmann’s “four-quadrant brain model”, the students’ dominant learning modes match either one of these quadrants. Design education needs the synchronized functioning of all these quadrants with the emphasis on either on of them for the development of different skills. Herrmann himself says “A balanced view between wholeness and specialization is the key: The brain is designed to be whole, but at the same time we can and must learn to appreciate our brain’s uniqueness and that of others (in Lumsdaine E. and Lumsdaine M., 1995)”.

Learning the thinking preferences of students and making them realize their uniqueness is very important to accomplish the process of transformation successfully. Those students with dominant upper-left quadrant prefer “External Learning”, so lecturing with reference to concrete examples provides the opportunity for addressing such students. This should not mean to show the solution of the given problem but a systematic explanation of the concepts with visual examples of other fields would work. Once they are able to find the correlation between an abstract composition and a piece of music, for instance, it becomes easier to cope with all sorts of design problems.

The students with dominant upper-right quadrant prefer to learn through “Internal Learning”. Their artistic talents, insights and visualization abilities are much more developed than the others. Those exercises freed from rules and principles let them express themselves as they like, however all those discussed until than will inevitably be guiding their work.
The lower-left quadrant requires “Procedural Learning”; the students as such are good with testing and hands-on exercises, they have a practical viewpoint and developed manual skills. Instead of listening lectures or reading for hours they prefer to put their ideas into practice. However they have the tendency to complete the assignment as soon as possible but without spending much time on the essential aspects of the problem, contrary to the internal learners who wait for the angel of inspiration for days. Those students that approach the design work like filling in a checklist need to produce many works until they discover something exciting during this process of repetition, otherwise they come up with ordinary projects presented precisely.

Finally it is the “Interactive Learning” that matches with the lower-right quadrant of the brain. This type of students learn from experience, feedback, discussion and values. It is a must to have long discussions in design education however these students prefer talking to making. Time limitation comes out to be a remedy for such students as well as for those waiting for inspiration1.

Lumsdaines (1995) argue, “Effective teachers have discovered ways of incorporating each one of these learning modes into their teaching strategies. This goal is not always easy to achieve when the instructor may have strong thinking preferences in only one or two quadrants”. It is even harder in design education that requires the co-functioning of all four quadrants. So the attributes of the teaching staff come into the scene. It is almost a must to study as a group with changing properties. By way of this students with different learning preferences can be guided properly. Nevertheless even a single instructor should be able to balance these modes of learning by employing all of them with certain intervals to sustain motivation.

A very crucial point to be stressed in relation to the configuration of the academic staff for the first year is that it necessitates a change every year. It is the most laborious period of design education and special expertise is required; refreshment is an inevitable need both for the teaching staff and for the curriculum. Due to its specific status a total replacement is impossible so at least one experienced instructor should remain constant to organize the course and let the others propose the modifications, which will at the same

1 The learning modes mentioned here by name are directly quoted from Lumsdaine E. and Lumsdaine M. (1995); their interpretation in design education is the contribution of the author.
time free the established ones from their obsessions. On the other hand the young staff in rotation will experience teaching beginners as well as internalising the basic concepts to reflect in the coming years more effectively.

Finally as a component of design education the space should be mentioned. The required properties of a design studio are known to everyone; so constant. However a change from time to time is believed to increase the motivation of both the students and the academic staff. Excursions in the city and field trips to other cities have great contribution to education for many reasons that will be mentioned in the coming part, but total or partial alteration of space is a tool for refreshment. Having an out-door jury or arranging the studio furniture in a different way may act as a new start especially for those having difficulty in concentration.

“Joy” at the end: the final projects

Apart from orchestrating the transition period of the beginning students with reference to number of variables, the professional goal of the beginning design education is to prepare them for architectural design projects. As a matter of fact the ability to make spatial organization with the consideration for the properties of different spaces is aimed to be accomplished. So the constant for final assignments of the year can be stated as an all-inclusive project that will associate the fundamental principles of design experienced on an abstract basis with the concrete conditions of architectural design. The final project can be approached as turning point in this respect and it is not fair to reduce this last attempt of the year to an exercise for mastering spatial organization.

While designing the final assignment we should pay due attention to the constants within the ‘main constant’; the variations at this stage come into being with respect to these ones.

It has been stated that the final assignment should cover all those studied throughout the year so the subject of properties of the elements is discussed with reference to the characteristics of different spaces. Asking for spaces to house different activities provides to study size variation; colour and texture are now the properties of the elements that constitute the space and shape/form has to be enhanced with the concern for other attributes such as light. It is not enough to benefit from geometric relations to determine the position of spaces within the environment and with respect to each other; the students should realize the significance of activities in relation with one another. Orientation means more than placing the elements of an abstract
composition; one should care for the geographic inputs. In addition to these already experienced issues, different degrees of privacy and closure appear as new definitions for design elements. The distinction between static and dynamic spaces, consequently circulation has to be comprehended. The relation of the given site with its nearby environment and the series of relations in between the spaces within the boundaries of the project area should also be studied. The final project is a means to discuss hierarchy as the most critical ordering design principle with reference to previous studies in a comparative way.

The conditions that facilitate perception are referred once more with the architectural design project that requires grouping of certain activities. The students realize that similarity is not limited with the use of elements sharing visual properties; proximity can be utilized to form groups of spaces serving for the same purpose; continuity is not simply a line appearing in the composition but a condition that unites different spaces; and closure provides the limits in between spaces as well as relating them.

The final assignment should have a ‘story’ but not in the form of a building program. The students are expected to imagine the activities and try to find ways of proposing different relations thus experience the act of relating in another medium. So the story is a constant but changing every year.

As mentioned before organizing field trips can be stated as another constant of the first year program. The pedagogical contribution, as a means for refreshment towards the end of the year is surely an advantage both for the students and the instructors, but it is mostly a great experience for those kids leaving their protective family behind for the first time in their life. Learning to act as a group and sharing the responsibility with others, accepting the unbearable conditions at times, suffering the consequences of not being punctual and working more than ten hours a day without interruption provide a great opportunity to grow up. What is it that changes every year is the location of the site, however we aim to visit an archaeological site and prefer to select an environment with rural properties as an alternative to urban life. The students are expected to analyse the environment and make measured drawings as a part of the objectives of the course.

Closing remarks: my basic design assignment
This essay, which will be supplemented by visual examples of students’ works during the presentation, reflects my personal approach to beginning design education. This is the product of a teaching experience over twenty
years established on the basis of the *fundamentals of design*. With a strong belief in the power of *basic design discourse* as a universal system of abstract thinking, I have the tendency to see anything as a composition and analyse it on this basis. As a result of this it is possible to say that the beginning design education can also be organized accordingly and that is what I try to do. So this essay as a *composition* should also be considered a *basic design assignment* I give to myself\(^2\).

References:

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ABSTRACT

I think it is better to summarize some cognitive issues in relation to this subject; how we learn, how we should organize learning (instructions), knowledge, etc. before treating creativity and rationality. Is it, really, possible to consider creativity without any kind of involvement of the ability of problem solving? Do designers not solve a kind of problem while they 'create' an (conceptual) artifact? What kind of mental process is creativity? Is it a mental ability of physical nature only, or is it also a kind of constructed form what we might have built up through our lives because of our tendencies ever since our childhood? Have not we built up our present knowledge by experience, by intuition and by many other learning instructions?

Do we use our rationality only to solve algorithmic problems or is creativity also, somehow, a quick, well constructed rationality? Maybe both are of the same the same type of intelligence but creativity is more mystical to explain and the other seems to be easier to clarify.

What is it to be creative or rational in terms of mental process? What do a creative and a rational mental behavior look like? Do not we use (creative) methods that are rational as well as creative behavior? What might a creative method mean to us?

I would like to give some examples from my teaching experience by hoping that it gives some hint about this issue. When I ask my students to make some analysis or design for a given task, actually, they use declarative, procedural and tacit knowledge as well as their intuition while trying to reach their creative design solutions. Every semester they produce mostly similar results in many ways but also somehow different from each other. Each student has a different background in some ways as well as similar ones since the media gives them the chance of immediate communication besides that of local experience. I would like to present some examples of my students' work during the conference, which will reflect some of their rational and intuitive thinking within the global and regional effect.

One of the human cognitive faculties is intuition, as we all know. Students are more successful when we set them free to use their intuition besides using declarative, procedural and tacit knowledge. In all fruitful creative design process, teachers should rationally, motivate them to activate all their mental abilities to employ but then by helping them to find out the constraints of the issues at hand, since otherwise students can be lost in the sea of chaotic trivial and indirect relevant variables.

Finally, education should be rational enough to stimulate students to get trained in using mental leaps, which goes with the analogical reasoning, for
a creative learning process in the widest sense including how to achieve creative design solutions. They should learn to use all their abilities simultaneously to enjoy the synchronous effect of it.

Key words: Intuitive, thinking, rationality, creativity, problem solving
Synchronization of Mental Abilities

It might be useful to expose some ideas about conditions of learning before going in depth with rationality and creativity. Rationality, in the sense of reasoning, is easier to explain more explicitly than creativity.

We all understand that teaching can not satisfy the entire learning process since it is only one of the teaching instructions named learning by being taught”. There are more of learning instructions other than “learning by being taught; learning by discovery, by experience, by trial and error, by being told, by repetition, by analogy, etc.

We are not able to control the whole process of what students have already learnt and will learn. What we need is, first of all, motivated students who can learn. “The only thing that must be assumed is the existence of a student who is capable of learning. This is the starting point” (Gagne, 1985, p 19). Motivation and capability of learning are only the internal conditions of learning. There are also external conditions of it that teachers and managers of education should take into account. There must be a plan for teaching before teachers begin to teach. In particular, we need a plan concerning students' capabilities before beginning to teach and after; what are the standard knowledge and abilities to begin and to what end, what they should learn in each phase are all should be taken in to account to instruct effectively (Gagne, 1985. p 20).

Besides, we should manage learning, too. Teaching stuff should have a strategy to let students keep their motivation, guide them in their efforts.

Teachers have the one of the main tasks to motivate the students to learn, keep learning and guide them in the direction of their efforts, evaluate their the product of what they have learnt to achieve an effective learning system (Gagne, 1985, p 20).

Nevertheless, in my opinion, students need an environment of learning that teachers are dominant elements of it during lessons besides all other elements like learning equipments, libraries, and many others, so that they have a chance to observe and chose what they want to learn under the guidance of teachers to explore also their curiosities and abilities. Students and teaching environment can adopt themselves to each other.

We can make an analogy between the two-way process of learning/teaching and observer/his or (her) environment. “Environmental images are the result of a two- way process between the observer and his environment. The environment suggests distinctions and relations, and the observer-with great
adaptability and in the light of his own purposes-selects, organizes, and endows with meaning what he sees” (Lynch, 1984, p 6). This is, of course, only an analogy in relation to their roles of both the target and the source analogies: learners/teachers as source analogy and observer/environment as target analogy (Holyoak and Thagart, 1996). Another factor that is also external to students is instructing. Teaching stuff should provide well-organized conditions of learning for learners so that they can keep learning phase by phase and discover realms fit in their curiosities. “Instruction means arranging the conditions of learning that are external to the learner” (Gagne, 1985, p 20).

I think instructions are a set of external arrangements by teaching stuff to give way learners to use their mental abilities to process the given information to learn. “In the most general sense, instruction is intended to promote learning. This means that the external situation needs to be arranged to activate, support, and maintain the internal processing that constitutes each learning event” (Gagne, 1985, p 20).

We should also take into account the fact that selective perception is also a constraint which influences our learning that involves also the context (Gagne, 1985, p 81).

It is plausible, in accordance with the belief today, to understand learning as ‘information-processing’ which involves long-term memory, short-term memory (working memory) and retrieval systems, transformation and the like. (Gagne, 1985, pp 13-14).

Read further: “In order to enter and be stored in the long-term memory, the material of learning must be encoded. That is, it has to be transformed into a form that is semantic, or meaningful...Encoding, however, is the critical process by which incoming information is transformed into learned and memorable capabilities” (Gagne, 1985, pp 81-82).

Thus, what does the processed information become when it is learnt? This brings us to the concept “knowledge” which means to me: justified true belief that implies also many suppositions because its ultimate convincing concept is belief.

What can we say about sorts of knowledge? What kind of knowledge can we have? According to some sources there are 3 sorts of knowledge: 1-Declarative knowledge (knowing what which also has two sub sorts: a-language like representations, b- image like representations), 2-Procedural Knowledge (knowing how), 3-Tacit knowledge (some thing like implicit knowledge), and 4-Linguistic Knowledge (which is also a kind of Tacit knowledge since even if we can not explain all rules of our native language,
we still can use it and can be understood by people who use the same language as his own native one (Stillings et al, 1998).

Meanwhile, intuition is a different matter from tacit knowledge, although it might be seen like that. I think intuition is a kind of built in form in our mind; we get it by our birth. It is a kind of mental ability that forms our first reaction to the external data so that then we can test this experience later to make it become tacit as well as explicit knowledge. Many theories are written about it, I am not going to in depth with it; it is too a deep issue to explain it within a paragraph of a paper.

Nevertheless, there are discussions about the theory of knowledge. Psychologists and traditional epistemologists have different ideas about the distinction between declarative and procedural knowledge since, in their opinion, the two are very closely related. (Stillings et al, 1998, p 369). I think the difference between the two is imaginable, because we can never imagine anything without its functional relations. Some thing can only mean anything to us if we can relate it to some function that is also very closely related to procedural knowledge. Yet, I think we have declarative knowledge with some static properties (beside relational ones) like dimensions etc. which are activated during procedural processes. “Much of our knowledge— that is probably encoded declaratively, since much of it is mobilized in controlled processes” (Stillings et al, 1998, p 369).

And about tacit knowledge: “There is a classical intellectualist suggestion: if an agent regularly employs rules in the integration of behavior, then if the agent is unable to report these rules, then it is necessarily true that the agent has tacit knowledge of them” (Fodor 1981, 73-74; reprint of Fodor 1968 in Stillings et al, 1998, p 371).

After exploring some ideas about learning and teaching in general, it might be useful to summarize it by a schema (Figure 1). I try to explain here the representational, a Kantian approach I believe in. It shows that human mind constructs two kinds of knowledge in terms of objectivity (which is common to all human beings) and that of subjectivity (which is mostly individual). This leads us to another concept, namely “knowledge representation”. It is a kind of representation relates data structures to each other. “…a representation is a set of conventions about how to describe a class of things” (Winston, 1993, p 16).

A knowledge representation has four parts: a lexical, a structural, a procedural and a semantic (Winston, 1993, p 19).

Semantic net is one of the representation techniques in which there are lexical, structural and semantic parts besides other ones which are: associational, structured object, formal logic based, procedural, common sense knowledge representations and other approaches (Brachman and Levesque, 1985).
Nevertheless, representations should include many facets and they should be done systematically like theories, thus not fragmentary. “Theories, not individual sentences, are representations” (Hacking, 1993, p 133).

![Diagram of representational mind]

**Figure 1. A schematic representation of representational mind**

After having discussed about learning, knowing, and knowledge representation, I want to attempt to present some ideas about how to use all
kinds of knowledge during ‘creative’ design process and then how we should train students. If we study it properly, we can get to know better what and how to teach through some methods since our cognitive device is limited to solve complicated problems with many variables to take in to account. We need some models to understand complicated issues at hand under the pressure of time.

We must use models to manage complex problems. Some talented persons can use metaphors to produce new models, but they need time to be tested and ready to use (Lynch, 1960, pp 288-289).

What can we say about talent, then? I believe it is a kind of intelligent mental ability by birth that employs analogy which occurs by mental leaps, metaphor, circumscribing (finding the relevant information and eliminating the irrelevant.), quick recognition, relations between issues at hand in the widest sense (thus analysis), has quick perception of some aspects in relation to the problem at hand. Thus, a talented person seems to have nearly all mental abilities. Yes, I think he/she does have these but only in some issues.

Let us consider a talented architect who is said to be an idiot in economics. Is this person born with all skills and knowledge in architecture and without any kind of ability in economics? There is probably a fact that people can be born with gifted hardware and I guess this leads them to have tendency to explore what match with their interests. In my opinion, this talent occurs in the same way as the above-mentioned intelligent mental ability does. These mental activities are in essence rational.

Let us suppose all these cognitive activities were possible to teach to ‘untalented’ persons. Would it be possible for them to be able to act like talented ones? I suppose not since the quickness and tendencies would differ.

In spite of this pessimist but clear sounding idea, we can still teach and train students. We can make them explore their capabilities.

What do we need to begin with designing if we follow these ideas about mental activities of having talent? The schema (Figure 2) shows what the possible design phases are, and what we need to begin with design.
Figure 2. Some possible design phases

This is, of course, not a linear process; only a sketch of it and architects break the rules sometimes. Besides, it includes recursive and iterative processes.

Figure 2. Some possible design phases

All these phases include different scales and a bit different kind of information. Yet, the cognitive process in each one remains unchanged. The schema (Figure 3) shows the original approach to design and analysis process but I modified it to other two ones (Figure 4 and 5).
In figure 4, it is shown how we analyze a precedent through its form-operation-performance. This is, of course, one of the methods for precedent analysis. We use precedent analysis to learn about solutions that are on the surface look different but in some ways similar so that designers use it during design process. “To create concepts one needs to be able to detect similarities between situations despite their differences” (Holyoak and Thagart, 1996, p 22).

One of the most important task of precedent analysis is finding out what hidden (morphological) relations and principles are that underlie the form of the artifact at issue. It can be first seen as some thing different from its real morphological structure because of its immediately accessible properties, if we study it properly we can understand correct properties of that artifact. Here this state of art is explained with a very good example: “For example, on the basis of readily accessible properties that can be seen, people presumably will not judge whales to be very similar to other mammals not fish, they will probably acknowledge that with respect to some important, although less accessible property or properties whales are similar to other mammals. This observation suggests that restricting oneself to relatively accessible properties may make it difficult to account for the perceived similarity of whales to other mammals. If one can not appeal to “hidden”
properties, it is difficult to explain the fact that people might recognize such similarities” (Vosniadou, 2003, pp 179-180).

All these ideas imply that we should analyse the artefacts to gain proper knowledge of it. I mean by analysis in its general sense: it is a kind of representation of breaking up a whole into its components on such a way that the elements do not have to be broken down into more ‘unnecessary’ (due to some criteria) details; besides, the structural and semantic relations between components must be preserved and exposed. This “… unnecessary details…” will lead us to the term ‘morpheme’ in morphological analysis of architectural design. By morpheme I mean: the smallest meaningful unit of an artifact and morphology is the science of morphemes (Tzonis, 1992).

![Diagram](image)

**Figure 4. A possible cognitive structure of (architectural) precedent analysis, compare with figure 7**

Thus, in this schema (figure 4) we can see how the form is related to operation and performance. The form of an artifact is further analyzed into its major units, sub units and finally sub divisions. Spatial relations (figure 5, 6) are recognized and represented as a semantic net work. There are of course many aspects of its form, but I think it is useful, first of all, to find out its basic
units and their relations beside organizational sorts of it since otherwise we would have been lost within unnecessary details. We would not see the hidden principles of precedent at hand to be analyzed. Objects are mostly not the same as they are seen. “Our sense of direct understanding is an illusion, because the apparent simplicity of everyday comprehension arises from the subtlety and complexity of the human mind” (Holyoak and Thagart, 1996, p 22).

Figure 5. A schematic representation of the major units
Figure 6. A schematic representation of the major units
This schema above represents a way of modeling design process, a kind of synthetic one. This process is applied to all phases which is shown in figure 2.

Synthesis is bringing the ‘undividable’ (in accordance with some criteria-morpheme) components into a possible whole(s) within their mutual structural and semantic relationships. This is, of course, a very short explanation of synthesis in general. Later on I will, further, explain what possible combinable mutual structure and semantic are in (architectural) compositions through their components or morphemes /and or: combination of morphemes (objects).

During every design process, designers analyze what relevant is. They use precedent knowledge which is from allover the world. They learn from each other; they build their semantic networks through entire environment they act in, globally. Each of them learns from other designer’s semantic networks to become more capable of creating better design solutions. They should keep doing it—without losing attention on the importance of regionalism—because: “Although the individual concepts in a person’s semantic networks are important for thought, the full power of human thinking depends on its capacity to combine concepts to create more complex structure” (Holyoak and Thagart, 1996, p 22).
Finally, this study implies that design teaching stuff should provide relevant knowledge, implicit/tacit and explicit, and also learning environment so that students freely can explore and develop their abilities by being guided by teaching stuff. It is thus useful to use all kinds of knowledge since they have then a synchronic positive effect on teaching and learning.

References


AN IMAGINARY FIRST YEAR DESIGN COURSE

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ABSTRACT

First year design has initiation as a common denominator amongst all curricula in schools of architecture. The preparation and the anticipation for the choice made by the students and their expectations for the ‘journey’ that begins, culminate in this specific moment, which will soon prove to be the first in a series of such instances that wait to be experienced. As such – the first in a series of architectural design experiences and points of architectural epiphany – first year design requires strategic planning since it represents the awakening towards consciousness in architectural composition. Methods of approach, analytic processes, representational tools are taught on one hand, inspirational thinking, abstract expression, and abilities to bridge different disciplines is sought and triggered on the other. This paper gives an insight to an imaginary first year design course based on a number of experiences: a critical approach of the first year design studio in the school of architecture, art and planning of Cornell University, in the late eighties. An analysis of a series of influential articles, papers, statements, addresses, essays and course overviews on the education of the architect and the first-year architectural design course, will assist in gathering information for the education of young architects. The scope of the paper is to re-establish the way we see pedagogy in architectural education, through a curriculum on top of the academic program but in direct relationship with it. The theme: “Dreaming First Year Design Education: Utopias, Expectations and Reality”, gives this opportunity to express these thoughts, which happen to be more realistic than utopian, since all educators seem to function in a similar manner.

Keywords: initiation, journey, imaginary, impromptu, consciousness
AN IMAGINARY FIRST YEAR DESIGN COURSE

Imaginary as an adjective is used in this title in the platonic manner of the ideal; a utopia that does not suggest an unattainable future, but one that presents a situation “up there, in heaven” that functions according to a system, the way it should, as one person or more feel it should. At the same time it asks of this person or people to abide by its rules – their rules – not by heading up in the clouds but by living according to them in their very pragmatic and every day life.

It also represents my skepticism on the institutionalized system and set of objectives of how an education occurs, since I am convinced that specified and codified teachings are boring to listen to and follow where as confusion and impromptu discussions are the real virtues of architectural academia.

“… the possibility of the right program is a myth, and the belief that the program is the essential carrier of a pedagogical position - that it both says what is most important about learning to be an architect and does so straightforwardly - is a fiction.” That is what Peggy Deamer, Assistant Dean at Yale University’s School of Architecture, underlines in her published essay in Perspecta, #36, with the title: “First Year: The fictions of Studio Design”. She continues to determine that more essential than the program are the network of relations, “the exchange between critic and student, between student and product, between critic and product” and thus if “we are interested in producing an architectural citizen, a person interested in contributing to civic life via her/his skills as an architect - the entire net of relationships of the studio teaching - the critic, the program, the object and the student—needs to be examined.”

To this systematic and very real assessment, I remembered my Deans’ welcome address in my freshman year in Cornell University back in 1988. To be exact I found his words – the same ones that he used to greet us upon our arrival – on a keynote address that Prof. William McMinn gave for a symposium in the school of Architecture and Urban Design of Kansas University in November 1990 entitled “The liberal Education of Architects”. Amongst many he said and wrote: “Perhaps a liberal education occurs best in the personal relations between faculty and students, students and students, as well as in the extracurricular enrichment of exhibits, concerts, travel, lectures, and thoughtful discourse late in the evening in the local coffee shop or the famed all-night sessions in the studio. Perhaps it is here, in these activities that challenge the mind, the senses, and often the body, that students recognize the world around them, and which becomes the foundation for the liberal education for the architect. Perhaps it is here, rather than the formalized packages of knowledge called liberal arts courses
collected in hourly measure, that ensure a liberal education. No other
discipline of education has this informal arena of discussion and inquiry; one
which develops individual and group relationships and promotes an
understanding of complex environments.” (Domer and Spreckelmeyer, 1991)

McMinn spoke of the studio as the hive of architectural buzz, humming and
vibrating with ideas, challenges, debates, fights, revelations and conquests.
He also suggested that which we all soon discovered in our first year and the
rest of our years in Cornell; the extension of space from studio to the coffee
shop, the bar, nature, the public building, a concert hall, a movie theatre, a
construction site; also the expansion of time from the programmed hours, to
all-nighters one after the other, to overlaps between courses, to power sleep
sessions, to truancies for explorations.
What also came as a reality was our relation with our teachers. In the most
informal manner we communicated with them on a first-name basis as if we
were schoolmates and we also received in the most formal sense their
criticism on architecture.
This informal character of our relationship with our teachers on the one
hand, their harsh but justified criticism on our projects based on the twofold
"you say it, you show it" on the other, the talks about architecture all the
time, the sketchbook to have around even in a theatre so as to exercise in
blind drawings, the proof that they don’t tell us something that they do not
believe it but the live by it themselves, the ability to make sense and after a
while to not make sense, the heavy whys’ on the analysis of the context and
the personal interest in your inspirations and thoughts, the excruciating
corrections on our verbal skills of communicating an idea and their openness
in its representation – as long as it showed what we had just said that it will –
the search for an underneath thesis, for a hidden agenda which had nothing
to do with the program of a building but had everything to do with its
architecture, the constant re-reading and redefining of the program as if to
underscore its inability to sustain essential information unless we reveal it by
questioning and contradicting it, are some of these aspects that were not
described in the overview of the courses.

In a statement delivered at a conference at the Museum of Modern Art in
New York City, in 1974, Colin Rowe addressing the subject of Architectural
Education in the USA, makes a parallelism between christianity and modern
architecture, adopts a “pseudo-theological tone” and refers to architectural
education as if it was the apple from the tree of knowledge; simultaneously a
temptation and a trap. He continues in his well-known sarcastic manner to
presume architectural education to be a very simple matter; and the task of
the educator specific as the following:
1. to encourage the student to believe in architecture and Modern architecture;
2. to encourage the student to be skeptical about architecture and Modern architecture; and
3. then to cause the student to manipulate, with passion and intelligence, the subjects or objects of his conviction and doubt. (Rowe, 1996)

In another case, Colin Rowe was asked about some extra but essential requirements for the education of the architect. He said that there should be two courses required of all architects; first, a history of ideas, how they develop, influence each other, and inform people and cultures; second, geography, to understand the nature of the physical world, the sense of place, and relations between the environment and human development within it. A third possible course was the discipline of a second language, which enriches the first language in its use and expression. (Domer and Spreckelmeyer, 1991)

Stephen Grabow, from the University of Kansas gave in the same symposium about the liberal education of architects, a prefatory address with the title “Sailboats and Sonatas”. And by borrowing from Gestalt psychology the term “isomorphic correspondence” – the idea of similar structural relationships occurring in different media – he related Bernoulli’s principle (which states that if a moving stream passes across a column of air or liquid, the pressure is reduced over the column – as if the force of the stream going over it “pushed aside” gravity momentarily), with the lurch that you feel when you bring the sail of a sailboat into the right aerodynamic curvature, and the roof of the Kimbell Art Museum by Louis Kahn thus connecting architecture to science. In the same manner he connected architecture with the arts through music and more specific with Beethoven’s sonatas through rhythm, harmony, proportion, alternation, repetition, variation, in composition and by the ability of both – architecture and music – to give form and shape to the tensions, ambiguities, contrasts and conflicts that permeate our feelings. (Domer and Spreckelmeyer, 1991)

In the zeitgeist of the sixties, Hans Hollein publishes his manifesto in the Viennese architecture magazine Bau, entitled “Alles is Architektur” – “Everything is Architecture”. His everythingizing project echoes the multidisciplinarity in schools, magazines, and practice that was briefly to sweep through architectural schools toward the end of the 1960s. “Alles ist Architektur” is deeply imbued with the decade’s countercultural revolt against the narrow conformism of the 1950s. Whether more somber - as with Debord and the Situationists, the Groupe Utopie in France, and Herbert Marcuse in California - or more madcap and Pop - as with Archigram in England, Archizoom in Italy, and the Metabolists in Japan - the basic approach was
the same. Hollein’s own revolt was paralleled by similar developments in all fields of arts and sciences. At the same time Hollein was writing “Everything is Architecture,” Joseph Beuys was claiming “Everything is Art,” and John Cage “Everything we do is Music.” (Lefaivfre, 2003)

Alberto Perez-Gomez in his introductory essay in 1999, entitled “Education of an Architect: Unravelling a Point of View” for the re-publication of the book “Education of an Architect: A Point of View. The Cooper Union School of Art & Architecture” gathers in his conclusion the following: “… the architect needs to be well-educated, not as a filing cabinet of specialized know-how and discrete information but rather as someone who knows where he or she stands, becoming responsible for a personal making in view of the dilemmas of contemporary culture, understanding why one makes (and what one accepts as an ethical task), and not only how. We have come to realize that words are indeed important and that the architect must learn to articulate poetic intentions in language, grounded in history, whose horizon, like the space of architecture, is also linguistic. The ethical imperative of architecture demands that we learn to speak properly in order to act properly. Our fragmented and often hidden traditions must be reconstructed through language, and this discourse, our stories, truly our memory, can then effectively be projected into work as a conjecture for a “better life” through the architect's ethical imagination. Language is not merely a convention. When it speaks through us to reveal something significant, it discloses something other that grounds it, a more-than-human world. By analogy, architecture operates in its own universe of discourse, opening up worlds for human action, novel poetic sites for dwelling that must be construed as spatio-temporal situations, not only as objective spaces or aestheticized forms” (Hejduk, 1999)

If the First Year Design Course was an architectural project what will its program be? How would one begin to analyze the aspects and areas of knowledge that need to be included? What would the scope of such an introductory class be? Which would be the key parameters that would safeguard its results? Do we know what these results ought to be?

Professors Val Warke and Mark Morris in their course overview for the First-Year Design Studio in the Architecture School of Cornell University for the Academic Year 2007-08, describe their work in the following manner:

“This semester will entail a journey: one that implicates new skills and techniques, that provokes unforeseen and unforeseeable ideas, and that reveals and suggests a variety of social operations. But the journey will be unlike any other you may have encountered in an academic situation: straight paths will be consistently interrupted by irregular bumps and meanders.
The topic that will drive the semester both as metaphor and device is the 'Archipelago', and it will serve to introduce the following themes that will be elaborated throughout the first semester: Defamiliarization, Abstraction, Space, Speculation, Internal Dialog, External Dialog. The Studio encompasses a broad skill-set. Freehand writing, drafting, and orthographic projection will be introduced in addition to a variety of modelling strategies. Scale, proportion, ordering systems, sequence, and translations between two and three dimensions are key aspects of the course. 'Archipelago', as theme, also treats particular notions of site and narrative.

They introduce the idea of a journey. They also suggest that the road will be bumpy. They don’t secure the students with a catalog of events, nor with the fact that they know what they are about to experience. There is no assurance, that the choice to study architecture is countable and specific. A topic is introduced, with an unknown word as if to dazzle them by the splendor of their first assignment; as if it is more important than the tools and mechanisms they will invent to explore it. A sense of a veiled secret scents the air; mystical, welcoming and maybe dangerous...

So studio but also a coffee shop; believe in architecture but be a skeptic with passion and wisdom; orthographic projections but enriched and expressive language as well; isomorphism to relate architecture with arts and sciences via sonatas and sailboats; a journey towards Ithaca “that by now you must already have understood what it means”. A network of relations created between teacher/critic and student; between student and student; between an architectural citizen and both architecture and society. A translator between two and three dimensions – maybe even a fourth; Architecture cannot depend on formal processes of precedent or measured experimentation with codified results. The method is imprecise, the judgement is subjective; the program or problem of architecture needs to be transcribed according to the demands of time, the complexity of the world and its society.

What Deamer underlined emphatically was the importance of the net of relationships of the studio teaching and the failure of a program to hold an axiomatic value; what McMinn exemplified was the expansion of these relations out of the school defined area; what Rowe urged us to do was to demystify architectural education as a religion whose followers will be accepted in the scheme and that we need to stand with passion and intelligence against the irrationalities of a doctrine; what Grabow applied was a way – isomorphism – to create bridges with the arts and the sciences; what Hollein manifested was that “everything is architecture”; what Perez-
Gomez suggested was that by learning to speak properly we act properly in architecture and that we have to enter in the discussion of the education of the architect the \textit{why} and not be content with the \textit{how}; what Warke and Morris initiated was a journey of discovery.

Yet there are constants which need to be met. But the variants are so many and constitute the real treasure of architecture. And still the introduction to architecture is not in either. It might be on the learning of things that we already know by looking at them through a new filter. It might be the understanding of a different kind of thinking that is needed to present the idea, which will become architecture. It might also be “that architecture really does not exist. Only a work of architecture exists. Architecture does exist in the mind. Someone who does a work of architecture does it as an offering to the spirit of architecture… a spirit which knows no style, knows no techniques, no method. It just waits for that which presents itself. There is architecture, and it is the embodiment of the unmeasurable,” as Luis Kahn suggests.

We need to initiate the new students to this irrational, confusing and self-contradictory new world. An educator could undermine his or her own conceptions of how architecture is taught, by constantly challenging his or her definition and concepts of architecture. But it is up to the personal relations that we establish with the students; it is up to this impromptu curriculum, outside of the academic program that will engage them in the seriousness of their choice. To make them understand that the real task is to achieve consciousness and not authority in architecture and in their lives. And to that one has to offer only comradeship, since it is not a prerequisite for educators to have achieved it nor does it come with experience alone.

\textbf{References}


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Sait Ali Köknar studied architecture in Istanbul Technical University. He was an active member and organizer of Turkish Architectural Students Assembly. He finished his masters degree in the Building Technology program of the ITU Faculty of Architecture. He worked as an architect and survey analyst in several architecture offices. He founded with partners Mono Architectural Designs. Currently, he is fulltime faculty in ITU Faculty of Architecture and a PhD candidate in ITU Architectural Design Program. His research focuses on design thinking and first year architectural design studios. He is writing and editing in several portals and magazines of Turkish Architectural Media.
This paper is based on a series of assignments devised for the ‘expression techniques’ module of the first year design studio of Istanbul Technical University School of Architecture during the Fall Semester of 2007. Officially, the studio is registered as ‘architectural project one and presentation techniques’. During the evaluation of the curriculum of the school of architecture in the late 90’s, the content and the goals of formerly separate ‘architectural project one’ and ‘technical drawing’ courses were merged in order to realize an ‘integrated studio’, although ‘basic design’ course was left intact and separate.

The motivation behind the ‘integrated studio’ was and still is to reconcile the divide between compositional, graphical, scientific and technical knowledge, and to fuse them into design knowledge. With the existing paradigm, the curriculum is divided asymmetrically in favor of ‘auxiliary’ courses and the studio. During the seasonal evaluation seminars of the design studios main topic of concern is still the lack of integration of the knowledge given in the classrooms into the design activity.

In the first year design studio, one of the main divide is between technical drawing and architectural representation. Learning to draw a coordinated section and plan doesn’t necessarily lead to thinking with section and plan. Going beyond presentation of ideas into the realm of conceptualizing and representing the world in many different but appropriate ways was the key to our understanding of the studio. To reconcile the gap between technical drawing and architectural representation we devised a series of assignments going parallel to the other design activities in the studio. The assignment is basically to draw and make alternate models of a pair of shoes a number of times. The shoe was the most appropriate available object at the time with an internal space, free form and complex internal structure.

Assignment ‘shoe’ started with finding and ordinary pair of shoes, and cutting it longitudinally with a saw. Students were asked to draw a plan and a section of the existing shoe on a paper with a prescribed layout. Following six assignments asked from students to build models of the shoes in different techniques and draw a coordinated plan and section. They were also asked to turn in a representation of what they did using a given layout technique. They produced six models, seven drawings and six representations each, summing almost to seven hundred drawings and models in the course of ten weeks.
The triplet of model, plan-section and representation has provided a surprisingly fruitful framework to talk about graphical and structural knowledge in terms of conceptualizing the world and representing it appropriately.

The full paper will try to discuss the process, output and consequences of the assignment in detail using diagrams, texts and visuals based on the first year design studio experience of Fall Semester 2007.

**Keywords:** first year design studio, graphical presentation, representation, design communication, technical drawing.
“you can fly if you'd only cut
(chorus) loose, footloose
kick off your sunday shoes”

This paper is based on a weekly ‘shoe assignment’, devised for the ‘expression techniques’ module of the first year design studio of Istanbul Technical University School of Architecture during the Fall Semester of 2007. The program and content of the studio was designed and applied by Asst. Ascc. Prof. Pelin Dursun, Research Assistants Dr. Funda Uz Sönmez, Burçin Kürtüncü, Saitali Köknar and Aslıhan Şenel.

A Slightly Different Introduction
Monday, it is officially the first day of your university life. There is a couple of hundred freshmen like you running up and down of the 90-meter long studio hall looking for his/her group. Everything is new and strange. You are looking for friends, a familiar face in the crowd. Teachers, it seems, are badly prepared for the first day. It is all confusion and stress. Finally they call for a gathering. They give you your first assignment: find a partner, take two cardboards and make a working cardboard stool without using glue. You manage to do it despite the burden of having a partner. All the stools gets displayed and voted, selected, discussed and criticized. This brings an end to the first day. Then the second assignment is announced: Find a cheap pair of shoes, cut it longitudinally and draw its plan and section by the next Thursday. Your jaw drops…

About Integrated Studio
Designing requires a set of often conflicting skills such as developing ideas, analyzing the situation, making operations in constructed three dimensional space, communicating concrete and vague ideas, collecting a quite large amount of knowledge about practical world, understanding mathematical abstractions, managing resources like time and material, seeing the big picture, making connections etc. It is very crucial from the very beginning how we categorize the required skills to be a designer. It represents our understanding of design and effects the way we teach it. The design of the curriculum of a design school is based on these assumptions. For example if the ‘making’ is highlighted in the understanding of design then a hands-on curriculum is adopted. Highlighted designing skills differentiate the institutions and their philosophy of using new technology, understanding of
the precedents, design as a multidisciplinary activity etc. And yet all the institutions are trying hard to introduce all the designing skills into their curriculum to present a complete picture of designing to their students. But one dilemma remains to be solved: where to start? This question is in the jurisdiction of first year design studios.

In the curriculum design of many modern schools the studio is accepted as the application arena for the reflective practitioner, so well described by Schön (1987). The knowledge learned in other lectures and class’ is supposed to be integrated into the projects within the studio hour. Building construction technology, history of architecture, structural mechanics, strength of materials, arts, philosophy, social psychology, construction materials etc. are thought respectively outside of the studio in a hands-off, listen and take notes environment. The curriculum disintegrates design knowledge then requires from the studio to reintegrate it. If the studio is where designing happens then ‘integrated studio’ is an oxymoron. It is a cover-up for an actually disintegrated studio.

During the evaluation of the curriculum of ITU Faculty of Architecture Department of Architecture in the late 90’s, the content and the goals of formerly separate ‘architectural project one’ and ‘technical drawing’ courses were merged in order to realize an ‘integrated studio’, although ‘basic design’ course was left intact and separate. The actual debate on integrated studio is beyond the integration of basic design, plastic arts, technical drawing, and visual expression techniques. During the evaluation seminars of the design studios main topic of concern is the lack of integration of the knowledge given in the classrooms into the design activity and the need to reconcile the divide between compositional, graphical, scientific and technical knowledge, and to fuse them into design knowledge. The goal of the studio is to provide an environment for the students to internalize the knowledge they had access during their design education.

Awareness is a key concept toward internalization (Aydınlı 2007). In his detailed dissertation Heape (2007) quotes Kimbell (1999) who made a survey on design schools in Britain in 1998-99 who encountered a lack of awareness towards the skills and process that students and tutors uses tacitly. In the article of Fazey and Marton (2002), they study how abstract learning and understanding are differentiated and distinguished from each other in people’s experience and thinking. The process of internalizing knowledge may be described and modeled according to the surveys they have produced:

‘understanding (1) – learning – understanding (2).’

First, they explained that you understand that which you are
supposed to learn. This act of understanding is light, instantaneous and effortless. Synonyms such as ‘you accept it’, ‘you take it in’ are used. The next step includes all the processes of working on that which you have grasped. Somehow you process it, you absorb it, you make it really yours. And the third step: you really understand it – now you have appropriated it for yourself’.

**How to Appropriate Technical Drawing to the Design Studio: The Shoe Assignment**

If we represent design activity as an ongoing parallel thought process where the designer is exploring and interweaving appropriate solutions to a design problem, a beginner designer faces the challenge to bring together all the process. It is almost like building a bridge or arch. Structurally they don’t work like they are supposed to until they are finished.

During this cognitive reformation, an intellectual guide or a control question helps reaching to awareness. Learning to design and designing itself is like an odyssey. You can get lost easily and getting lost is very necessary in design education. A vague idea of what you are supposed to do, the first step of Fazey-Marton model, a control question, a hint of direction to follow helps to move forward. Mayer (2004) argues that learning in general is a discovery but it is more efficient if it is a guided discovery.

Constraints and rules help to formalize thought process. It is always possible to break the rules. Students trained with formal exercises tend to be more agile to find their ways in more complex and informal situations. If this is a guided discovery, there must be a lot to discover otherwise a couple exercises and a handful ways to solve them becomes very didactic and leads to a false impression of the true complexity of design activity.

Using changing constraints and rules implies the volatile and ambivalent character of the designing process. Students learn to navigate from a cloudlike problem definition to a cloud of probable solutions. They can appreciate the alternating network-like character of designing. They can move beyond ‘right and wrong’ and start to appropriate.

The shoe assignment integrates technical drawing and graphical design as visual communication and also merges model making, form making, structural design, analyzing and rationalizing a complex form. The shoe is a very convenient object for the assignment; it is hollow, it has a layered structure, complex form, and manufacturing philosophy, which is similar to architectural objects. It is a reversed and implicit way to introduce how to design a shape as complex as a shoe using several modeling techniques
and how to represent internal qualities of the project using different graphical tools. Making a model of an existing object is easier compared to building a model of a non-existing one. This is an opportunity to discover the technique itself. It is easier to draw parallel projections of an existing object available to close inspections, preferably something that you can hold. One can concentrate to the act of drawing.

Previous studio experiences identified some problems during the introduction of parallel projections known popularly as technical drawing -or TD- to the first year design studio, which must be addressed while designing a new assignment. Students come to the school of architecture pre-loaded with conceptions about technical drawing. They categorize drawings into technical drawing and free style drawing. When they draw a technical drawing they draw what it should be not what it could be. Technical drawing is based on rules leaving a very narrow space to customize. Students perceive TD as a black and white line drawing based on external reality. They don't integrate their feelings, thoughts and personal realities into TD using graphic tools such as collages, texts, colors and 2D textures. For some students it is extremely hard to draw a mentally constructed parallel projection i.e. plan, section, elevation. They can't grasp quickly the benefit of using scaled parallel projections therefore they identify TD as a boring, procedural, compulsory procedure that you have to use. Some of them cannot mentally rotate objects that they draw. Some of them cannot really see what they are looking at. They look but cannot see the details. Their understanding is a quick general outline of the object. Beginners can draw a silhouette but they cannot grasp the details or the intricate relationships within the object. The observation depth is shallow for the beginners. These handicaps to internalize parallel projection and other visual communication tools into design activity are to be overcome by the individuality of the design activity itself. Every shoe model, drawing and representation is designed by the student and belongs to her/him.

**Procedure**

At the first day of the semester, students were asked to find a pair of cheap shoes with a complex layered structure. They were asked to cut one longitudinally. Some of them cut it at home, some of them found a carpenter to cut it for them. For the next studio hour they were asked to draw a plan and a section of their shoe as best as they can.

*Figure 1. Layout of the drawing, from the ‘shoe assignment’ of first year design studio ITU, fall semester 07-08*

Next session the drawings they brought in were criticized and they were assigned to take picture of the shoe from a given angle, and draw it again,
this time one by two scaled top view, side elevation and a section of the shoe with a pencil on an A3 format drawing paper. The layout of the A3 was standard for everybody; a picture on the left column and an aligned top view, side view and section on the right column. On the bottom of the left column they were asked to write the code of the assignment and their names vertically (Figure 1). They were not told until they have turned in the first step of the assignment in that they were going to repeat this process every week. Every Monday they were going to make a different model using a different technique that would be explained, make a drawing of the model as they did for the shoe, plus on another A3 drawing paper they were going to represent the process and their ideas using a visual expression technique that would be explained as well.

In brief every week they were asked to build a model using a given technique, to draw parallel projections of the model, and to express their ideas and process using a given graphic technique. They were asked to use their creativity under two constraint, one for the model and one for the representation, and the other drawing was also predefined and based on simple rules (Table 1). Constrained nature of the assignment left them a very narrow space to personalize their work. Towards the end of the work, when they got used to the procedure and it became repetitive and predictable, they expressed some of their complaints and concerns about the assignment, which was perhaps ‘killing their creativity’.

<table>
<thead>
<tr>
<th>Step (Code)</th>
<th>Model Making Techniques</th>
<th>Drawing 1 Parallel Projection</th>
<th>Drawing Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Original Shoe</td>
<td>plan, section, elevation</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Horizontally Sliced</td>
<td>plan, section, elevation</td>
<td>Alignment</td>
</tr>
<tr>
<td>3</td>
<td>Vertically Sliced (hollow)</td>
<td>plan, section, elevation</td>
<td>Photo collage</td>
</tr>
<tr>
<td>4</td>
<td>Folded</td>
<td>plan, section, elevation</td>
<td>Typography</td>
</tr>
<tr>
<td>5</td>
<td>Triangulated</td>
<td>plan, section, elevation</td>
<td>Mixed Media</td>
</tr>
<tr>
<td>6</td>
<td>Wire Frame</td>
<td>plan, section, elevation</td>
<td>Line</td>
</tr>
<tr>
<td>7</td>
<td>Composite</td>
<td>plan, section, elevation</td>
<td>Texture</td>
</tr>
</tbody>
</table>

Table 1. List of Constraints for ‘shoe assignment’, from the program of first year design studio ITU, fall semester 07-08.

Fifth step had to be repeated twice due to the difficulty to understand and apply triangulation process. In total the assignment lasted 10 weeks.

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</table>

Figure 2. Examples from ‘free style’ representations using typography, line, alignment and mixed media, from the ‘shoe assignment’ of first year design studio ITU, fall semester 07-08.

In the fourth week a collection of contemporary projects and buildings using
the same form making techniques such vertical slices and folds to rationalize complex forms were presented in a lecture format to the students.

Output
After ten weeks of repetitive work, 96 students produced 7 different model of the same shoe using different techniques summing up to 672 shoe model and 1342 drawing. All of the ‘shoes’ were exhibited during the following semester at the western hall of Taskisla (Figure 2 and 3).

Figure 2. Exhibition Space, from the ‘shoe assignment’ of first year design studio ITU, fall semester 07-08.

Figure 3. Exhibition, from the ‘shoe assignment’ of first year design studio ITU, fall semester 07-08.

Exhibition layout is simple and easy to read differences and resemblances between shoe models. Every student has a column of 30 cm wide. The column starts with the drawings they have produced, following the original shoe and the models. Layout provides parallel reading. Vertically it is possible to study the work of the same student using different techniques. Horizontally one can compare the different approaches of the students to the same technique (Table 2).

Benefits and Consequences
Many skills require time to internalize. The assignment was repetitive and lasted 10 weeks. It was not required to draw ‘correctly’ at the first step. Student had a chance to improve him/herself at the next step. Every student had a different pace of improvement. 10 weeks provided time for individual adjustments, catching ups and refinements.

Studio communication between tutor and student benefited from a constricted narrowed down ground to discuss, propose and criticize. A well-defined assignment can guide a student through the process without unwanted intervention from a moderator. Student can work the problem with his/her own control questions e.g. ‘is the model satisfactory, does it look like the original, is the model making technique used properly’ or ‘is plan and section satisfactory, do they conform with the object, are line weights used to give a depth’ etc.

Table 2. Exhibition Layout, from the ‘shoe assignment’ of first year design studio ITU, fall semester 07-08.
The topics in the studio dialogue during the evaluation hours of the assignment has changed or build-up from simpler or primary issues to the more complex or secondary issues; coordinating plan and section using guidelines, constructing a parallel projection, line weights and perception of the drawing, learning to draw letters and using texts, putting more detail into the drawing.

Third step of the assignment required a representation of the process and qualities of the week’s theme. This second drawing provided a relatively larger space to personalize the expression of the work and an opportunity to discuss presentation and representation in terms of abstract ideas, appropriateness of the model and graphical representation to the given constraints. This is the least understood step giving no clue or guide to the student.

Benefits of the mass education are discovery in teams. Production of large numbers of variations in the studio creates a fuzzy environment where experimenting with ideas and exploring different solutions encouraged. The studio creates the opportunity to observe a number of solutions instead of one leading possibly to an understanding of design as navigation through probabilities.

Well-defined and constricted nature of the assignment exposed, variations, alternate solutions, different model making and representation techniques, initiating the skills to navigate, discover, select knowledge.

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STRUCTURING THE FIRST YEAR DESIGN STUDIO

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For a student, the first year design studio is generally the most difficult one to understand. On the other hand, first year design studio is supposed to create a foundation for further years. It has the special and critical role in design education. One of the most important reasons, students do not have any clues about the process of design. They get face to face to a new language which is quite different than they used before. Another important element is communication with the tutors. First year design studios experience helps them to form their general ideas about design which will distinguish the professional character in future.

The first year of design studies, combined with each student's developing creativity, commitment and passion, is a preparation for the advanced work and intense focus of second, third and fourth year. Main aim of basic design is to teach thinking and acting creatively but in a disciplined manner. It helps students to bring their abilities into the foreground and to develop their knowledge. Students’ culture, historical backgrounds, urban identities, traditions, technologies, environment, socio-economic conditions and geographical conditions have all left marks upon their first year designs. This paper is going to discuss a sequential structure starting from unconscious level to reach conscious design attitudes- by considering some examples are outcomes of the 2005-6 academic year. A year (two semesters) is generally structured into four phases. The initial exercises are related with abstractions and reaching to certain design elements. Students generally are not aware of the aim of this level while exercising. The second phase is creating compositions by using design elements defined in the first stage and learning about design principles (each step of this phase seeks to provide the discovery of different design principles like order, balance, harmony, repetition, contrast...etc). The third phase is the combination of design principles with certain functional requirements, structure, scale, space definitions. And the most complicated level is the last exercise combining the previous information with an urban texture.

It is expected that students have gained the ability of defining the problem, analyzing its nature and creating proposals in a designer discipline. It starts with spontaneous actions and reaches to an important awareness about design. As a result at the end of the first year, students have been introduced with the complexity of the architectural design process and have learnt the importance of creativity.

**Keywords:** first year design studio, architectural education, creativity, awareness, design process.
STRUCTURING THE FIRST YEAR DESIGN STUDIO

Introduction
The first year design studio has important an role in explaining the general criteria of architectural education. Experience helps students to form their general ideas about design which will distinguish the professional character in future. The basic design characteristics and primary goals of architectural education are considered including:
- sensitivity to complex rational, emotional and aesthetic qualities of architecture and design
- creativity
- abstract thinking (Hasançebi and Acar, 2007)

Architectural design education and also first year architectural design studios present a wide variety of methods and applications. The first year design studio aims to develop various methods to solve any design problem. The student participates in the design studio to gain experience how to analyze the design problem and create proposals accordingly. As a result of these experiences students are expected to be ready for the advanced studios. It helps students to bring their abilities into the foreground and to develop their knowledge. One of the other important parts of the first year design studio is to learn to communicate with the tutors and to express their ideas to the audience.

This study mentions a review of an integrated studio education, its organization, concept, process, structure and products. At Eastern Mediterranean University –Famagusta, North Cyprus- basic design studio has a certain structure that varies through the years based on an experimental nature. Instead of explaining the general method, it is preferred to present a general method conducted in the first year design studio in academic year 2005-6. The course was designed for over 120 students in four groups following the same program and it was hosted by twelve instructors. These courses are the foundation courses for all students in the Faculty of Architecture of EMU.

Sikiçakar et al. (2006) defined the studio education as an active rather than a passive process and mentioned that they aimed to establish a dynamic, experimental studio structure which is open to inputs from the students and to the results gained from spontaneous activities. They referred to Schön's (1985) approach that has been summarized as principle of “reflection in action”: “spontaneous knowing-in-action yields unexpected outcomes and we react to the surprise by a kind of thinking what we are doing while we are
doing it”. It is understood that we have used quite a similar method applied in different steps and exercises.

In this paper first year design studio instructors present four design problems: created for the first semester: Abstraction & Let’s Play (1), X-Tand (2), and for the second semester Bus Stop (3), Activity Area for Children (4). The authors used the project analysis methods for explaining the structure of first year design studio. They selected students’ projects spontaneously in order to reflect an objective image about the studio experience.

**Warm up Project: Make an Insect**
The first exercise was a warm up project. Two students formed a group and selected an insect in order to produce its model. The requirements included research about the shape, colors, characteristics of the selected insect and making the model according to certain level of abstraction. By considering the type of the insect, the model of it was asked to reach approximately 1m length and to be freestanding. (Figure 1)

![Figure 1: Examples of warm up project.](image)
The basic aim of the warm up project was:
- communication between the students (at least between the groups),
- to find ways of research for necessary level of information,
- to explore the meaning of abstraction and application of it,
- to exercise the model making techniques in a creative manner (by the selected materials)

**Phase 1: a) Abstraction**

This exercise has been planned in four steps which are connected to each other. First, students were asked to take some photographs of some scenes in the existing environment. These might have been close ups of flowers, trees, trash hills, a part of the city or of some buildings, etc. These photographs had been exhibited and then discussed in the class. During this discussion students had been encouraged to give reasons for the selected frames, tell about the favorite photo, and talk about other examples. Unclear ideas, difficulties of expressing themselves in front of other students were the initial visible reactions. Tutors have guided each student concerning the potentials of some photos as preparation to the following steps.

After the selection of a photo it was expected to define a part of it and conduct three presentations by using different techniques, focusing on different geometries. They might have used pencil or pen techniques, on white cardboard. Some simplifications might have applied when necessary. All three versions of presentations were exhibited and discussed in order to define the potential/promising one for the next step.

Students were required to realize an abstraction of the selected composition through simplification and represent its main elements with geometric shapes and lines. They were asked to try to understand the order and the kind of organization which exist in the composition and try to emphasize it. Slight changes might have been done in the original composition to create or emphasize an order. Black and white paper has been used for that 2D exercise.

The last step was mainly the development of their compositions. They were asked to use a 2D base and to make a 3D representation of their composition. (Figure 2) They might have used differences in height, textures to emphasize the 3 dimensional orders in their new proposals in order to learn about design principles in 3D composition. The variety of solutions gave chance to experience the reflections of personal approach differences in each project, which gain more importance in further years in education and professional life.
The basic aim of phase 1a (Abstraction) was:
- by reducing the photographs’ color into two (black-white): increase of concentration on shapes and the relation between them,
- increase of the awareness of abstraction in 2D,
- to exercise different 2D techniques (pencil and ink sketching, collage, negative-positive effect)
- encourage students to express their ideas at every level with common discussions in class in order to enforce them to think before taking an action,
- discover the basic principles of design (order, hierarch, balance, harmony, unity, repetition, etc.) in their compositions,
- transformation of 2D composition into 3D by using the basic design principles,
- to use texture.

*Figure 2: Transformation from 2D to model composition.*
b) Let’s Play
At the starting point of this phase students were asked to choose 2 volumetric elements (cube, pyramid, cylinder, sphere, rectangular prism, etc.). The first requirement was the decision of the relation between these 2 volumetric elements (how to combine these elements) that has created a unit.

Children can play and enjoy themselves in any environment as far as its design offers them a variety of spaces and surfaces to hide, to sit, to jump, to slide, to crawl, etc. to discover their bodies’ limitations and capacities and let them create a world of their own. In step two the problem has been defined as “design of an environment for children between ages 5-12 to play”. Creating a composition out of the five units in different directions within an order (with some changes/transformations in units to provide passages and different kinds of spaces) was the eventual aim of first step by considering circulation and space requirements of children (in an imaginary level). Linear and planar elements, texture have been added to support the definition of minor and major spaces.

Color was the last element that have used in 3D compositions in order to support the existing ideas. The primary colors, black and white gouache paints were the resource for the color scheme. Accordingly the color wheel has been practiced on models.

The basic aim of phase 1b (Let’s Play) was:
- to experiment with the compositional possibilities of the chosen 2 volumetric elements,
- to apply one or more design principles in order to achieve a composition by using a certain number of units (combination of 2 volumetric elements),
- to learn scale,
- to exercise circulation
- to define (imaginary) spaces that have different characters for different functions,
- to exercise color wheel.
Phase 2: X-Tand
As last project of the first semester a stand for an exposition of industrial products’ in Cyprus should be designed. Students have decided about the product (kitchen utensils, stationary products, electronic devices, telephones, etc.) in order to design a suitable exhibition area, storage, information and resting (for the responsible person). By considering the nature of the expositions, stands should be composed of modular elements which are demountable. Open, semi-open and closed space definitions and organizations of them; circulation pattern through the spaces; reflections of the chosen product on design of the stand; usage of texture and color; design of built-in furniture were the additional requirements to be considered in their design process.

The basic aim of phase 2 (X-Tand) was:
- design by considering functional requirements,
- demountable stand design – usage of modular elements,
- presentation of project in 2D/ to use graphic language (site plan, plan, section, elevation)
- to exercise all the design principles and elements that had been learnt before.

Figure 3: Examples of Abstraction exercise.
Phase 3: Structure – Bus Stop
The second semester started with a research about skeletal, surface and solid structures explaining the system, structural behavior, typical material, types (if any), examples from nature, typical architectural example(s). Students formed in groups of 3 or 4 and prepared presentations about one structural system, designed a poster and made a small model that shows its basic characteristics.
In order to practice the new information, the bus stop design in EMU campus was introduced. Some of the structural systems were found not suitable (like masonry dome, vault, arch) for that project. Then the students selected either one system (truss, shell, folded plate, tensile) or a composite system for their solutions. It was asked to design the bus stop in a modular system in order to use the same project side by side or at several places on the campus. Signboards, sun and rain protection, number of the persons standing and sitting while waiting were special requirements for the design process. The most important expected outcome of that project was to make the relation between structure, function, scale and aesthetic requirements in a project clear.

The basic aim of phase 3 (Bus Stop) was:
- to emphasize structures' importance on form,
- to experience modular design solution in order to be capable of forming groups,
- to experience the complex nature of design process.

Phase 4: Activity Area for Children
The final project of the first year was named: the “Activity Area for Children” in the walled city of Famagusta. The students were expected to improve their skills in designing spaces and forms by considering environmental factors, structure and topography.

Children from Famagusta and neighboring settlements would meet there to do and watch performances, visit exhibitions, and enjoy. This area then would have been used throughout the year for all kinds of organizations related to the children. The site was a part of the St. Nicholas ruins in the walled city of Famagusta. On the site, there were two historically and architecturally important buildings, which should have been integrated into the projects. However, it was asked to perceive these buildings as abstract forms without considering any historical meaning or reference. But it was recommended to design with light and neutral building materials and structural systems, which would give the possibilities of temporary, modular and flexible space and form arrangements.

The functional program had been defined as a semi-open space for different performances such as dances, concerts, etc; an exhibition area for children handicrafts, paintings, etc.; a kiosk to sell sandwiches, drinks, etc. with a semi-open sitting area; a stand for selling children books including space for story telling and reading; a stand for selling different toys and games including a space for playing games and toilets.
The design process started with an analysis in order to understand the urban, climatic, topographic values of the site. The initial layout proposal was followed by conceptual approaches. This process exercised by drawings and model making. All students were asked to use both techniques parallel in order to experience each technique’s developing effects on initial stage of design process. Conceptual approach, pedestrian and vehicle traffic, grouping the functions, structural and formal problems were the basic issues that students have tried to solve.

The basic aim of phase 4 (Activity Area for Children) was:
- to consider urban and historical texture as a design element,
- to analyze all data about the design problem in order to understand the nature of the problem,
- to generate a critical thinking,
- to evaluate different data before making design proposal,
- to prepare students for further design studios with a complex design problem.

Figure 5: Final project examples
Evaluations and Conclusion

The target of this study was to analyze and discuss a sequential structure of a first year starting from unconscious level to reach conscious design attitudes by considering some examples that are outcomes of a year. As a result of the evaluations and observations made above, students had been introduced to the complexity of the architectural design process and to the importance of creativity.

However, in the beginning stage of the education the students did not have enough knowledge about architectural design. At the beginning of the first semester they mostly reflected their observations and possible assumptions for the first project. Then, they learnt about the design principles (harmony, contrast, repetition, rhythm, etc.), texture, color, scale, function, structure and construction materials. They started to connect their experiences and knowledge and reflected these concerning their projects. They exercised problems starting from simple to complex one and experience design process in several connected levels throughout the year. As a result of this study, it is possible to say that the students gained the ability of defining the problem, analyzing its nature and creating proposals in a designer discipline. It starts with spontaneous actions and reaches to an essential awareness about design.

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EFFECTS OF PREJUDICE IN FIRST YEAR
ARCHITECTURAL BASIC DESIGN STUDIO

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ABSTRACT

Introduction
The main aim of this paper is to discuss how prejudice, both in students and tutors mind, effects the design education, particularly architectural education. In addition, we try to identify the channels that create prejudice and search the tracks and evidences of prejudice in design environment. In the final phase, solutions for the identified problems are sought.

Method
It is a socio-psychological fact that everyone gets some prejudice while growing up. Probably this is a necessity, as everyone is in need to simplify the environmental data that he/she gets and foresees the unfamiliar events of the life. So, the prejudices are created in someone’s mind as “stamps of thoughts”.

In the first part of our research we tried defining how these stamps of thoughts, prejudice and effect students’ works. We assigned different practices to students, which have concrete subjects and some abstract and fuzzy subjects.

Prejudice and visual codes given by the design education at school or university are also subject to this research. Examining about the curriculum and the courses given in schools and universities especially over architectural history courses is also another main topic of this research.

Result
This approach helped students to open up their minds and gain new perspectives and horizons. They learned questioning and searching for the new; also they learned how abstract forms can give birth to new and more improved forms. They also became more suspicious and started asking more questions. Design should start just with questioning even gained knowledge and information.

Key Words: basic design, prejudice, history of architecture, questioning, abstract idea
EFFECTS OF PREJUDICE IN FIRST YEAR ARCHITECTURAL BASIC DESIGN STUDIO

The effect of prejudice in design/architecture education can be examined in two ways: firstly, prejudices and the images that were coded in students before their design education; secondly, the prejudicial approach of the educators and the prejudice that are given in the schools of design/architecture.

1. Coded Visual Images and Imagination in Students’ Mind

Our elementary and high school education system corrupts the students’ minds by encouraging them to memorize information (Teymur, 2000). So when they come to a design school they almost forget questioning and wait everything to be served. In the first year of design education students are eager to learn new things but they do not know “how to learn”, they seem to be oriented to memorize.

Main hypothesis of this paper is that students are blocked with their coded visual images in their minds about some concepts. These concepts are mostly the concepts which they are used to see, hear or face too much in their daily life, such as house, home, weather, family, country, technology, music..etc. When some basic design works related with these subjects are demanded from students, they can’t use their potentials. They, mostly, make compositions which are more ordinary. On the other hand, when they are asked to make a design of more complex, freaky, extraordinary or unusual subject they are obliged to think of different solutions.

To emphasize this phenomenon some examples of basic design courses are chosen to prove this hypothesis. In the first practice the subject was to design some chess stones in two dimensions. The subject was given as: “In your mind, try to invent some chess stones composed of three dimensional geometrical forms.”

In the second practice the subject was more abstract. This time the subject was given as: “Design a four dimensional balanced dynamic composition by using one of the archaic time concepts that reveals the following event: When a lemon and an apple superpose over one another, they form a fruit.”
Figure 1. Student Works using First Approach

The two subjects described above were given to the same students in consecutive weeks with same time intervals. Subjects were given to the students in a written format and described in the same manner. But they differ in their imagination format. The first subject had an image from the beginning it was given to the students because of its design element: Chessstones. Everything was so clear in the students’ mind and that was to design a chessstone, which had an image of appearance in the mind: bishop as an elephant, knight as a horse, castle rock as a fortress and so on. So it was hard to remove those images from the students’ minds. And mostly their work had a very strong influence from their imagination and image map that was coded before.

Figure 2. Student Works using Second Approach

On the contrary, in the second practice, the subject was much more abstractly oriented, even though it had two main simple elements, namely an apple and a lemon. The motto pushed students to think and to get rid of the main shapes of the fruits and coded them as a metaphor and to think in a
different way. The art works designed by the students also prove our thesis that the subjects given to the students should be much more neutral and should not inherit elements of their general image map coding. When the subjects become much more abstract, students start to think and start to leave their general image map and start generating their own image map, which has to be the main aim of first year design education.

2. The Prejudice given by Design Education: History of Architecture Courses

This approach has another face, the prejudices of the tutors. The prejudices of the tutors are probably much more dangerous than that of the students. Even in primary schools, children have been educated to draw “good” pictures not to paint the sun in purple. Picasso said that, after visiting a painting exhibition of kindergarten students, “Excellent paintings! I used to paint as Rafeal when I was a kid; it took me 40 years to forget everything given by painting education and to be able to draw like these children”. Architecture, as an art, needs freedom. It is possible to say that the limitations given by the formal education dominate the imagination and the artistic character of the children. In history of architecture there are many architects who did not get formal architectural education. The most famous ones are Le Corbusier, Kenzo Tange. They educated themselves by traveling, observing and learning by doing.

So, is the curriculum of architectural education, itself a prejudice? Are the students an empty bowl that are to be filled? Are they huge marble blocks to sculpt? Is the aim of the architectural education to give students new prejudice for their professional life or to open their horizons and give new perspectives and let them question the every day life and start each design without prejudice? Architectural design and architectural history sometimes seem as an undetectable duo and sometimes as a dangerous combination. And the role of the history courses in architectural education is always a contradictory issue. We have to re-consider the architectural history and then its place in architectural education and practice.

Why does history of architecture find an essential place in, almost, all curriculums in architecture schools? Architectural History is part of architectural curriculum in many ways, and answers/reasons can vary...because every architect has to learn the classical architecture and its proportions; because every architect has to learn his/her national architecture; because history gives the student a general idea of art culture, because students have to learn the old grand masters and their buildings etc.... If architectural history education is intended to justify these reasons,
such a situation can be considered as a mistake. So History of Architecture should give students the ability to evaluate built environment and architectural works. It must not set rules; nor teach clichés of “old and beautiful” buildings. While examining architectural history, the main elements of architecture (buildings, cities and every artificial environment designed by humans) should be examined and discussed. Students should then try to understand the reasons/background of them. So the history of architecture courses help to interpret the present and forecast the future. But it is hard to call listing the buildings and memorizing them “history of architecture”. What makes the architectural history is criticizing architectural subjects, establishing the relations between them and understanding the realities underneath.

Another matter in architectural history education that causes irreversible misconceptions in students' minds is presenting architectural history in compartments. As we know, students in architectural schools learn only limited geographies and periods in history of architecture. Europeans learn European architecture, Asians learn Asian architecture, and ignore all others. Every nation has to examine and learn its own treasures, but this should not mean ignoring others. In some programs, history of architecture begins with Egypt. In others, it begins with Neolithic caves in Asia. Sometimes it ends in 1960, sometimes in 1999. History of architecture education should be open-minded (Alsac, 1990). If we consider the history as a laboratory, the chemicals that are used are not so important; the important thing is the principle of the reaction. Subjects can change, but students should learn the way of thinking, they have to get the ability of criticizing and being an inquirer. There are millions of existing and ruined buildings in the world. And all buildings are subject to examine; including all recent projects. Of course not all of them are the subject of architectural history, but the ones that have “Architectural Value” are also so many for someone to learn. But selecting the building to work on is the job of the historians. History itself is nothing but an interpretation, and selecting the buildings that are worth criticizing is an interpretation all by itself. But history of architecture education almost always forgets to mention about this.

**Conclusion**

These examples show us that, involved in design education or not, everyone has a design intuition. But with time, we take some information from the environment we live in or the education we have. And with all these information, our prejudice starts to take shape. Unfortunately, in many cases prejudice takes control over intuition. The way the practices are given effects students’ minds and provoke them to think in different ways. The practices given should help them to open their mental locks, and provide them to think
in a more open-minded mode. But one question arises at that point: “Is it possible for someone to get rid of all the prejudice he has, and are there any ways to do it?” It seems impossible, and it is not needed to do this “utopist practice” in design education. The main point is to be aware of the prejudice, and to learn how to control them. The first year education of architecture should consider this, and should keep this in mind and establish new ways of first year design education. The responsibilities of tutors of the first year are crucial. The courses in the first year should be examined all together as a whole. While each unit represents itself they have to match and complete each other. To open the students’ minds, there are other possibilities beside courses. First of all, the image gallery of the student has to be developed. Excursions in the city or abroad, slide shows, exercises improving visual map, improving five senses can be very helpful. These activities should be regarded as an inseparable unit of the curriculum.

As a result from an architectural history point of view, if we speak with provocative terms, architectural history has no useful role in architectural practice. Of course old masterpieces of architecture are still masterpieces and we have many things to learn from them. But, for so long and still, history of architecture (i.e. old buildings) has been seen as a source of imitation. A Doric column represented the classic age of Greece, regardless of its function, in Britain or in China. Today, this usage seems to be changed, but it is still being used as a thematic source. If history of architecture education is considered as series of slides of plans and elevations, the use of them in practice, without judging, is nothing so surprising. But if we get rid of “architectural history education” and replace it with “architectural critic education”, this new approach eliminates the common practice of memorizing in architectural history courses and encourages students to criticize the building and man-made environment. We think that the important thing is not movements but thoughts, not buildings but their social background.

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Özgür KAPTAN was graduated from Eskişehir Anadolu University of Fine Arts Faculty-Department of Ceramic in 1994. She has finished her master of art thesis which name is “The Application of Ceramic Masks in Interior Spaces with Supplementary Materials Related to the Space”. Now she is studying in Basic design in many departments as a lecturer and continuing her profession as a ceramic artist at the same university. She was participated many group and 4 solo exhibitions. And also, she is a member of Society of Turkish Ceramic-İstanbul and AIAP-Association Internationale Des Arts Plastiques.
In a rapidly developing technological world, variety of fields and growing number of materials and tools are faced as ‘chaos’ in educating creative individuals. In all these complex things, aim in basic design education to express visual language’s plastic elements’ and principles’ meaning, promote the creativity, apply different materials, gain more experience and to establish an effective language. Creativity can be given with systematic and concentrated education to individuals while they carry some with born. Through this education, visual perception, thinking, aesthetic realization, inspiration and discovery, and creativity processes aim to develop hand-eye-brain abilities. Basic Design education controls the experience of visual perception and the accumulation of knowledge from the birth to today.

As an education program, Basic Design, which has a heavy task in the first year of the Fine Arts Programmes, is an important step to develop the individual’s creativity. By using the various materials and methods, the creativity of individuals is over tasked. This approaches which occurred with intensive practicing, develops the solving problems which is running into creative world. While the variety of these techniques and subjects are transferred as lectures, many applications, techniques and methods will be practiced. Depending on the courses period, these applications, techniques and methods assist developing the practical experience of individuals.

Discovery techniques, such as brain storming, on certain subjects in relation to experimental techniques are reflected to students. Besides many given techniques, content of ‘re-constructing’ involves breaking into pieces, comparing, masking, subtracting, adding, exaggerating, transforming, pulling in details, symmetry, widening and diffusion to produce new forms. These new forms can be expressed itself with many ways. One of them is the defined forms with the defined components which done by undefined materials. In this technique waste materials are used. The components of the forms, like the parts of an insect or organs of an animal, should be analyzed and defined with waste materials. In this method components of form combined with usual methods but different visuality depends on using waste materials.

As a result, each creative individual will be able to establish his or her own language with each used method and technique. Through this new concept of communication in basic design education, stretching the limits of creativity is targeted while ‘thinking they never thought and never seen before’. On the other hand, limiting the number in 20s is important to have face to face education. As a result of these efforts, grown individuals will try to find their place in design world.
Keywords: Design education basic design, methods, creativity, waste materials.
A METHOD ON BASIC DESIGN EDUCATION

Basic Design education, which is given as the main course of the first year in every department of Fine arts, is certainly the base of four year long education. As well as being educated on the main subjects, students have opportunities on working different types of materials. Students, after passing the preparation steps, can at least practice on working the principals of basic design at the first year of education. With this course as introduction, their knowledge will extend and provide disintegration to their department courses. The aim of the lecture that lasts for two semesters is to provide the permanence of the knowledge by repeating.

During this studio course the main purpose is to form one to one education. The lecturer should take care of the number in circulation of connecting, controlling and transferring the knowledge to each student. By this way, lack of information or the knowledge that has gained at the past can be changed with the new and the right ones.

The development of the coordination between hand and brain and the ability of seeing what you look, than transferring it on paper, can be gained by working with the natural objects. At this step, many objects that have already known by everyone care drawn quickly as sketches and transferred to the exercise notebook. Increasing the number and the variety of these etudes provides the student to examine many objects by drawing them. This is the first stage of creativity education.

Creativity sometimes needs to replace, break down or configure the learning that comes from the birth, related with the environmental factors. During this education it is important to coordinate the hand-eye and brain abilities at the same time.

In the course, Basic Design, which takes place at Fine Arts Department of Anadolu University in Eskisehir, Turkey, I teach educational and learning aspects of design principles in relation to materials in combination providing visual and aesthetic languages. Although basic design education has the same knowledge structure in general, different exercises can be applied for each profession. In this method, the aim of the basic design education is to break down the wrong and unnecessary knowledge which gained at the past. The main idea is developing creativity thinking supported with different perception and perspective. According to the program outlines, intensive repetitions on each
topic aim to stabilize learned information. In these repetitions, the aim is also to provide more experience to students while they are having various techniques and materials. During the course, after theoretical information is given with describing the related subject, students ask for approval on their sketches before they start working on applications. Techniques given during the applications, using different materials help students to develop their creative identities. Then some best and worst examples from past years are shown and students directed with given critics to their sketches. Visual perception, thinking and aesthetic representation is started for execution and selection of the color that suits with the concept of the design are talk with one to one dialogues and critics. Producing aesthetic object, in most of the times, requires to be criticized and to defend about your own work; at the same time, teaches to compare with other works. For this teaching, all works on selected topic are evaluated in the classroom with the help of instructor. According to this, student can position himself or herself in the group and he or she can be able to see his/her own place. Student can realize both the negative and positive aspects of his or her own product, so they can assess their works. The aim is to reach auto-criticism. Line, dot and plane are the main terms, headlines to describe the expression of design and art. Light and shadow will play an important role on the perception of three dimensionality in designs which drawn on paper. That's why sometimes exercises are configured just working with light and shadow on white paper as background or black paper as background.

Figure 2-3: Black paper as background

Behalf of these practices, there are experiments on color and pattern which they activate the design as aesthetic. Following the theoretical information, materials, such as charcoal drawing, water coloring, marker, guage and dry painting, are used. In all these practices, students are expected to narrate their drawn objects into three dimensional visuals. After this, three dimensional perception is developed through concept of structure. Besides all given techniques, content of ‘re-constructing’ involves breaking into pieces, comparing, masking, subtracting, adding, exaggerating,
transforming, pulling in details, symmetry, widening and diffusion to produce new forms.

Figure 4: Symmetry

One of the most excited experience for students is, by using waste materials they design known forms like animals, insects. It’s called junk materials or art metal. This approach gives a different point of view for using ready-made materials and applications.

In this technique, after choosing and designing the concept, undefined forms turn to the defined parts/organs of the forms. This experience makes a mind developing which belongs to the undefined to defined forms. And also this point of view, every existence from the environment, gives a message that every existence is created for a function. Giacometti said that “I've never seen an ugly thing in my life. Even though an existence is ugly, you can turn it a beautiful vision by the help of using light, color and perspective.”

Figure 5 and 6: Junk Sculpture

Figure 7-8: Junk Sculpture
As a result, each creative individual will be able to establish his or her own language with each used method and technique. Through this new concept of communication in basic design education, stretching the limits of creativity is targeted while ‘thinking they never thought and never seen before’. On the other hand, limiting the number in 20s is important to have face to face education. As a result of these efforts, grown individuals will try to find their place in design world.

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A METHOD OF SHAPING FORMS FOR INTERIORS

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ABSTRACT

Form is a three dimensional existence for our environment. All “things” has a form and it is defined by their quality of surface materials and their own functions. Not only the light and the color but also the moral assets give the values of this form. So, the form is perceived by the way of its materials and the way of perception of user.

In interior design, form has limitations. As a nature of the profession, designers deal with the spaces which will be/was formed as a part of a building. In interior, the form of the space is restricted by the limitations of the building, construction system and parts of the building like flat, room, place and etc. This character brings many limitations for designing different forms. In interior, the form of space has two main origins. One of them is the form which is done before; the other is form shaped by the designer’s creativity, requirements and the expectation of the user. In interior design, form which has no limitations is placed in the limited form of space. The scale, proportion, measurement of interior forms should be designed with the correlation to each other. By this way, form has a role in the quality of function.

As a result, in interiors, form is designed for requirements and the expectation of user, but it has to contain creativity. It has to be also unique, that means not done before, not seen before, shortly not designed before. Therefore, designing interiors, form should be shaped.

Keywords: Interior Design, basic design, form, limitations, creativity,
A METHOD OF SHAPING FORMS FOR INTERIORS

Basic Design courses form the beginning of creativity education and the core of education for the professions based on design and serve in creativity axis. During the first year of education programs, fairly broad topics from the theory to the application are handled in the scope of these classes in order to improve creativity. Three dimensional applications are also part of these topics. Three dimensional end product is expected to have genuine and unique forms in terms of its quality and visuality for the design disciplines based on application.

The form is the exterior image of every existence. However, there are a lot of descriptions for the form. For example the form is: “Any kind of element which occupies volume in the three dimensional space. Thus, each visual element is called a form.” (Wong 1972). According to Wong, the element should be created for a certain function and should occupy a certain place in the space. “Any work should form a mass in the space and should occupy volume… The appearance of exterior structure as three dimensional volume or as mass can also be named as the form” (Zelanski, Fisher 1984). Thus form should be perceived as it is existed or with its surrounding.

In brief, form can be defined as the existence which bounds the space with its surface and which occupies volume in the space for a certain function. From this point of view, forms seems as a secret which is bewared of defining as Alvar Aalto suggested. However it provides the feeling of relief in a style (Abercrombie 1984). However each form in the nature is created and defined as a result of a necessity or a function. Therefore each new created form should also be organized and created as a result of a necessity or function. As Kahn said, “Perception of a meaningful image is only possible if the person who sees this image actively participates in the organization process”. Thus, each individual can describe the images around him/her consistent with his/her identity. The source of knowledge and visual experience of the individuals is their environment.

An individual perceives the ready information around him/her including its secrets and mysteries. These mysteries can be solved in time and knowledge can be increased. Designers try to seek the novelty and unorthodoxy with the help of this information and experience. Their goal is to understand the reality in this structural existence, improving and explicating it by analyzing. Because of this reason, analyzing the mystery, namely analyzing the sensitivity created by the desire by means of wisdom and intuition and being able to create and produce the novel and unorthodox is the essence of new form seeking. This appears as a multidimensional problem in new form designing. In this indeterminate equation, the design of new forms requires much more intensive effort than familiar and well-tried one.
The existing forms have been used by many designers during the creative processes. Some artists and designers create new forms using original techniques inspired by these forms. However, the designers are expected to create novel, original, unique and unorthodox inspiring by the wide and rich accumulation of the past. This requires a creating process which includes the use of knowledge for creating the novelty with the help of wisdom and intuition. A lot of conventional and innovative methods used for creation process also used in form seeking alone or as the combination of various methods.

Design works can be done by differentiating the approaches and basic design components in compositions introduced by the use of basic and familiar form types. However, if the goal is to produce novel, different and unseen; the use of new forms should be provided in addition to the use of new methods. At this point of view, structural relation of plural forms provides the probability of creating original “new forms.” The new form can have more complex structure or it can be the product of a good idea, planning and creative process. Wong (1972) describes the possible designing methods and relations of two dimensional forms in terms of their positions and locations in the space as the following principles: detachment(a), touching(b), overlapping(c), penetration(d), union(e), subtraction(f), intersection(g), coinciding (h).

However, two dimensional works are not enough for the design disciplines working on the mass and volume. Adding even one more form adds the probability of offering various options in new form seeking. Although a three dimensional form passes one phase process, the effect of it will be very different from the effect of two dimensional forms (figure 1).

![Figure 1](image)
*Designing techniques for three dimensional forms*

The principles related with the organization of the form such as repetition, harmony, hierarchy, rotation, tilt, displacement (between solid and void),
trace and frame definition can easily be used with this method. Designing new forms is possible at the end of these complex processes. This approach can be seen in Peter Eisenman’s conceptual work “Guardiola House”3 (figure 2). The architectural building is appeared as a result of works on two different platforms and it was designed by using the relation types and designing methods together. The reflection of the form seeking to the shell, made the surfaces of this building different from the traditional view.

Figure 2
Peter EISENMAN. Guardiola House. (Papadakis, 1989)

Another example can be seen in Unity Temple by Frank Lloyd Wright. In this work of Wright, “repetition”, “harmony”, “contrast” and “hierarchy” principles are applied successfully. However square and cubic forms are combined by various methods and an integral interior space was designed. Moreover, the form of interior space provides the surface organization and the form of furniture (figure 3).

Figure 3
Peter Frank Lloyd WRIGHT. Unity Temple (Papadakis, 1989)

In this example Wright designed a new approach for a temple. He used not only traditional and new designing methods for forms (figure 4) but also the designing the circulation of interiors are also reformist approach for moral assets.

One more phenomenon should be taken during the first year of creativity education in the scope of basic design education for interior architecture/design which is categorized in design discipline. Although there are discourses such as limitless production or creativity without limits, interior architecture/design should have the limits. Because of this reason, interior architecture/design does not have a flexible designing area during the creativity phase contrary to the other design disciplines.

The field of application in interior architecture/design, by its nature, takes place in a building whose boundaries are defined. Interior architecture/design usually finds application opportunity in an area restricted by a structure and interior areas restricted by the buildings. Thus, the elements of interior space can be part of the design, to the extend these restrictions allow (Kaptan 1997).

The production of new form can be possible with two dimension for interiors. The first of it is shaping the area structurally and secondly, organizing the components of interior space which will take place in this volume. This organization can be compare with solid-void relation in a form. Solid-void relation is a description of massive forms which occupy place and volume in the space, and a description of voids in the same space. Surrounding of solid forms by the void forms can give us three dimensional form of the space. Voids are the parts of solid structures at the same time because the “whole” is formed by the organization of these two opposite (solid-void) forms (Kaptan 1997).

If a new form which is created by solid-void relations with a macro level point of view has relations with similar forms another new form can appear. This expansion can enlarge into limitless number and towards three directions. In
this new organization, the voids are important as well as the solids because it is strongly possible that these voids can turn into meaningful volumes in the new organization. However, the restrictions stem from interior architecture/design should not be forgotten. Consequently, there should be a limit for this productivity and design area should be terminated by a three dimensional frame. The expansion and designing of the form should be structured in these new boarders. This approach will act like the structures confine interior areas and will form a volume. The areas which can be defined as void in the new form complement will form the volumes where individuals live in tune with the necessities of the space. Different from the voids, the solids can have two functions. They can define first, their surfaces confine the volumes (ceiling, walls and the floor) with macro approach second, the furniture designed for the space-individual-function with micro approach in these volumes.

CONCLUSION
As a result, it can be said that each new form should have a message since each form exists as a counterpart of a function. The individual just sees and perceives an outer organization of this message, its meaning or knowledge. However this perception can occur by realizing moral values in addition to the outer confines and organization. Form production method which started with Bauhaus by copying and explicating the nature has developed with the use of different techniques. The use different techniques displayed individually enabled the production of different forms which have different values. In this sense, the use of different methods in order to design new forms creates richness. In addition to this, the relation between the form and the individual includes the function and perception. If the function is accepted as prerequisite for designing the form, the perception and individual appreciation as a result of this constitutes the relation between the form and the individual. The relation between the form and the form aims the beautiful, ideal and appreciation which overlaps with the interest of user when the designer uses his/her creative ability catches different shapes besides the new forms and organizes adjoining elements. The existing limits in interior design should not be regarded as the limitation of design. The designer who has concern for creativity can make the space attractive by considering the needs of user and using his/her original design. However, conforming to the limits of existing design space brings a certain design–application habit. It also provides learning the ethical values for the profession and the habits which prevents the violation of professional rules in the future. Another important result of this is that the intellectual development of the designer will be shaped with the knowledge and experience he/she gained.
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RETHINKING “LITTLE NARRATIVES” IN DESIGN EDUCATION

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Abstract

Grand narratives are the big historical-philosophical project of modern period related to progress. This project is about forming the unity through constructing cities and their spaces by detaching from characteristics making a place. Also spaces are described with the quantitative terms and converted to an instrument according to the requirements and changing conditions of capitalism. Thus today the requirement of “little narratives”, which are the traditional or local knowledge types, is getting more and more increased. The lack of main topics about transforming a space into a place and the human is causing multi level discontinuities can be seen in spatial design education. So it is very important to attract the student’s attention to these topics and enable them to be aware of these topics through “little narratives”. With this aim the application named “Moments Lived in Minimal Spaces” was held as a part of the program in Introduction to Spatial Design Studio. Making individual narratives, determining the relationships, characters, understanding the environment by an integrated view and then designing their space were asked from the students. Under the light of the constructivist approaches, this creative process is aiming to increase the awareness of the student and to lead them for the organization of the space with the conceptual and vital relationships. In this paper we are aiming to define the ways of searching the inputs that can create the differences for design process in a globalizing world and the new ways of motivation for the students. The scope of this study is explaining our design education approach in detail by defining the application and the results with all its aspects, addressing and sharing them for future expansions.

Keywords: Interior Architecture, Integrated Design, Constructivist Approach, Spatial Relationships, Little Narratives
RETHINKING “LITTLE NARRATIVES” IN DESIGN EDUCATION

The Little Narratives
Modernization is a product of the expansion and growth of scientific and engineering knowledge that make it possible to reshape and control the environment in a unique way (Huntington, 2004). Toulmin (2002) states that true thought, and action rationally starts with cleaning the page, and constructing a formal system in all equal cases. This approach, in a sense, corresponds to reducing the statement of Locke (2000) “a blank slate=tabula rasa” as a human mind, to a design process based on inputs constituting the positivist configuration, scientific thought, and technological progress.

Certain rules, standards and “universal laws” which are determined by positivist knowledge developed by Vienna Circle to build a rationalist society in 1920s, in other words “grand narratives” are “the big historical-philosophical project” of modern period related to progress and perfection. It is known that history, and progress; truth, and freedom; reason, and revolution; science, and industry are the main terms of this project.

This Circle, mainly constituted by physicists, and mathematicians, categorizes the knowledge into scientific, and unscientific, and asserts that unscientific knowledge is worthless. The factual world is always the main interest of this Circle. Therefore the world of knowledge is reduced to the world of the physical being and the expressions outside of perception that haven’t any factual response are characterized as metaphysics. That is why the things that have been seen as metaphysics (everything else constituting local knowledge type: cultural values, customs, traditions, beliefs, mythologies, and so on) are accepted meaningless.

Thus the mind, which underlies the modern thought, requires universality, unity, totality, and the idea of “the same rules for everywhere”. It is assumed that reasoning remains basically same in different countries, cultures and historical periods (Harland 1987, Rosenau, 1998). As a result Colquhoun (1990) mentions that positivism pushes the spatial design to eclecticism as well as functionalism through detaching meaning from pure means.

This idea is about creating unity and global facts, in other words: the form of the total unity by constructing cities and their spaces which are detached from social life and historical, cultural, local values that are the characteristics of making “the place”. The space is reduced to an infrastructure and described with the quantitative terms like size, speed, productivity, and amount. Also the space that can be redefined, reorganized,
destroyed in order to create the new, is converted to an instrument according to the requirements and changing conditions of capitalism.

According to Lyotard (1984) if these grand narratives are abandoned, a free play can be possible for the “little narratives”. These little narratives as the materials, which are the creations of imagination, are traditional or local knowledge types, so they are contextual, conditional, and limited. Actually little narratives are all the narratives of truth abstracted from scientific claims, and related to societies from which they are derived instead of being depended on objective confirmation (Kumar, 1999) These little narratives are also the features transforming a space into a place. At the end of 19th century when the first waves of modernist planning excitement occur, Daniel Burham insists on not being satisfied with the little plans. Against to Burnham’s statement, Aldo Rossi asks what he could long for in his career according to the conditions of today. His answer is “certainly the little things” as he has seen that history excludes the possibility of the grand things. (Harvey, 1997)

**Design Education**

Today the lack of main topics about the place, and the human can be seen in spatial design education is causing multi level discontinuities. So it is very important to attract the student’s attention to these topics and make them to be aware of these through “little narratives” by using integrated design approach from the beginning of their education. The little narratives statement includes the data constituted by the differences that turn a space into a place and the features of human being as an existence (=dasein). In this study “the little narrative statement” with this data is expanded by a priori knowledge about life carried by the design students that is shaping their personal narratives. In the spatial design education it should be preferred to allow students playing active roles in the design process, instead of transmitting grand narratives or generally accepted principles to them as inactive receivers. In this frame it is asked from student to catch vital differences in physical environment through little narratives, make them visible by spatial design and at the end create different spatial experiences. The main goal is to start from a little opening of the problem to the deep vertical layers of it by an integrated approach in order to create personal design solutions.

In general, the words “integrate” (to bring together or incorporate parts into a whole) and “integrated” (combining or coordinating separate elements to provide a harmonious whole.) come from Latin *integrare*, meaning “to make whole, to renew, and to refresh.” Benzel uses the phrase “Integrated design” as a concept that coordinates the discrete entities of room, building,
landscape and city. Integrated design is fundamentally a philosophy that reexamines common ground and boundaries and brings together diverse scales and disciplines into a single organizing network. (Benzel, 1996). Benzel’s approach on the integrated design gives us an expansion on physical dimension. But the integrated design concept focused on this study is not only a way to see the relationships between the different scales and to perceive our environment as a whole system but also understanding the unity of spiritual and physical dimensions forming the vital differences. Deleuze mentions that the power of thinking life as a whole corresponds to the concept of “the difference”. Life is difference and life is the power of thinking different, being different and creating the difference (Colebrook, 1998a). This integrated design approach is found very valuable in order to find different data and expansions for the design process.

According to Deleuze thinking is the event of art and life as a whole and there are three main thinking styles as the powers to transform life which are art, science and philosophy. Art is related to senses and the data of the senses, science is related to functions and philosophy is related to creating concepts. Philosophy creates the concepts by being an impulsive instrument on thinking different by creating problems. The concepts are not the labels or names, they are producing the way or the direction of thinking and they are more creative than being representative. So a concept gives us the opportunity to think beyond the known or assumed. A concept can force us to interrogate our way of thinking, by neutralizing it to find the new experience and present the new ways of seeing. Therefore we have the power to go beyond our knowledge and experience on thinking how to expand the experience (Colebrook, 1998b).

So the concepts can be seen as the instruments for creating new problems, questioning these problems and forming new environments of meaning. Consequently orienting the students to think with the concepts depended on the design problem and encouraging them to create the differences by the spatial narratives are very important for the design process. Since the concepts can not be managed alone, they should be understood with the new connections and the relationships with each other.

“Moments lived in Minimal Spaces”

The application held in this frame was a part of the program in Introduction to Spatial Design Studio, a second semester course in the First year of Interior Architecture education. Main problem named “Moments lived in Minimal Spaces” (Figure 1) was started by searching answers for the given
questions and understanding many basic relationships related to the generation of the space.

Some of the questions which were given under the explanation of “The space lived = Space+ Place+ Human” are written below:

- How a void defined as a cube by the dimensions 5m x 5m x 5m can be made meaningful?
- What will be the main quality of this void in order to differentiate it from others?
- What kind of an environment it will be in and what kind of relationships it will construct?
- For whom it will be made?
- What kind of a dwelling story it will have and what kind of a physical reality it will have?
- How the spatial boundaries will be constructed defining the space?
- How is the relationship of the interior and exterior and how this relationship will be defined creatively according to the main concept?

Making their individual narratives, determining the relationships, characters, understanding the environment by an integrated view and then designing their space in a creative way were asked from the students. The concepts
and the relationships that have been known or not, aware or not were aimed to be given indirectly to the students. They had the chance to recognize and perceive the basic concepts like human, space, nature, environment, interior-exterior, place, scale, proportion and structure by understanding their fundamental relationships on their own design problems and solutions.

Under the light of the constructivist approaches, this creative process is aiming to increase the awareness of the students and to lead them to organize the space with the conceptual and vital relationships. In order to realize this project, the students have been requested to decide “a name” indicating their design and write a short essay on their spatial and spiritual approach by defining the “key relationships”. Then they have prepared a presentation of the concept including 2d and 3d works in a format which was determined by the lecturers. But students also had a chance to use a free area on the presentation that they could experience their own artistic and creative ways expressing the soul of their design, the spatial relationships with their environments and their users. So they could be able to find new ways for telling their stories in a stable format that had given before.

There has been ten projects named as *Moments Lived on the Pier* (Figure 2), *A Stop in the Nature* (Figure 3), *Living near by the Sea* (Figure 4), *A Seasonal Shelter for Workers* (Figure 5), *In a Minimal Neighborhood* (Figure 6), *Resting Between Working Sessions* (Figure 7), *Meeting on the Water, The Mystery of the Tree, Research Unit, Mars Space Station Unit* and they were the main narratives that were transformed to spatial realities. Some of the projects will be explained below by their short narratives and the key relationships that the students used them for creating the spatial answers for their personal stories:

![Figure 2. Moments Lived on the Pier, Narrative 1.](image)
**Narrative 1**
To be in a place between land and sea and desiring to be in the nature away from the hectic life of the city

*Key Relationships:* fish, sea, seaside, shelter, sailing, away from hectic life, finding the self...

*Figure 3. A Stop in the Nature, Narrative 2*

**Narrative 2**
A stop or junction point for the mountain climbers or campers that they can be together in a safe, service place by the fire in the nature.

*Key Relationships:* fire, nature, camping, tracking, climbing...

*Figure 4. Living Near by the Sea, Narrative 3*
Narrative 3
A Living space offering a lot for the senses. A silent space that you can detach yourself from the noisy and exhausting life of the city.

Key Relationships: sunset, fish, sea, wine and love…

Figure 5. A Seasonal Shelter for Workers, Narrative 4.

Narrative 4
Creating an opportunity as a shelter for the workers who are leaving their homes temporary with their children and mattresses for seasonal work. Reducing the exhaustion of the day and overcoming the difficulties of environmental conditions.

Key Relationships: working, nomadic life, agricultural workers, shelter, temporary living space…

Figure 6. In A Minimal Neighborhood, Narrative 5
Narrative 5
An environment offering different and close neighborhood for the people who are searching for a place which is minimal, peaceful, simple, and natural.

Key Relationships: minimalism, natural environment, peace, simple life styles, neighborhood, sharing …

Figure 7. Resting Between Working Sessions, Narrative 6

Narrative 6
A space-place for resting between the working hours as a daily shelter protecting from the sun for the field workers.

Key Relationships: all daylong, enjoy, field, working, under the tree…

At the end of the project process, all the presentations were prepared as a total concept exhibition (Figure 8). Therefore all the Works as a reflection of the studio environment was shared by the other students, lecturers and the observers from other disciplines as an integrated presentation concept and opened to be evaluated.

Figure 8. Final Exhibition
By this, not only the end work but also the process and the basic concepts
related to the spatial design could have been observed by all people who
were interested in. The process and also the exhibition phase were
continued with the same targets like researching, analyzing, sharing,
participating and cooperating and collaborating. By the exhibition each
student could have a chance to understand what he has done in the total
process. Actually designing an exhibition overlapping the main idea of the
design problem has been found very effective for evaluating or observing the
results of the studio as a whole by making the process transparent.

As a conclusion, today in the interaction with the modernism and capitalism,
it is seen that the cities and the spaces inside of them have a rapid change
process, the plans depended on creating the grand narratives in different
scales has been put into practice and then the qualities of making a place
are being lost. The presence of non-place spaces based on scientific
thought and technological developments are gradually increasing and
spreading fast in global scale. This situation ended with losing the idea of the
place and causing individual identity and belonging problems like alienation.
In this rapid change process it is important to explore the potentials that turn
a space into a place by critical approaches and to evaluate these potentials
in order to find out the design solutions for the new.

Hence at the first years of the design education, thematic projects are seen
as the means in creating key problems with their key solutions for finding,
exploring, and practicing unique and creative ways. The main problem for
the lecturer is how a design problem with the complicated, complex
relationships will be given to the students, simplified to a basic question, and
which instruments can be evaluated in order to create a concrete reality. In
this process for the lecturers it is very important to improve their awareness,
diversify the ways of seeing, progress in the search for finding creative ways
for their students and also reexamine all of these steps continuously. Only
by means of these approaches a creative environment can be constructed
and shared by the students and lecturer.

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CREATING AWARENESS IN INTERIOR DESIGN EDUCATION

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Abstract
Interior designers are space coach of the new century. Innovative and progressive spaces designed by interior designers constitute a foresight and infrastructure for new life styles in society. Designers guide, even force, users to innovation. They have responsibility forming and transforming of the society as well as increasing the quality and comfort conditions of individuals. Therefore, in interior design education, it is aimed to rising the awareness of students and to be acquiring this approach to students by using the creative methods.
In interior design education, the most important problem about awareness is that it is given design briefs different from daily life, usually. Designers don’t have opportunity to work and manage together with users as in the disciplines of industrial design, architecture or graphic design. However, maybe only interior designers have the chance to work with the user and to manage design process together.
Especially, the design briefs which are given in interior design studio and having fiction in story, users, and spaces alienate interior designers from reality and real user typology. However, this situation causes a problem about awareness in education and having trouble of designers, especially in their professional life.
In this study, it is aimed to make a study motivation and awareness of problems in Interior design studio courses. Some solutions are offered about design briefs’ reality and applicable faced real life, in order to create professional awareness through the interior design studio courses in interior design education. Consequently, it is made interviews with 85 graduates of interior design department. It is proposed some suggestions about problem, as well.

Keywords: Interior design education, Interior design studio, Awareness, Study motivation
1. Introduction
The 20th century went down in history as “information age” or “productivity age” for someone. However the 21st century will be the age of “exchanges and informatics because big and important changes in many fields and subjects are expected in this century. The future of the countries will be determined by their capabilities to adopt these changes. The main goal of this change is to create safer, more successful, more comfortable and happier society. The most important source of the countries which work on this topic will undoubtedly be the well educated professionals. (Duzgun, 2004)

The organizations which give design education have great responsibilities for educating the designers of the future. Interior designers have the responsibility for mastering the new user profile and analyzing the new changed/transformed life styles correctly in this new era where accessing to information became faster, the comfort level increased, technology and material offer limitless opportunities when compared with previous century. This responsibility have importance not only for solving the relation between the user and the space correctly but also for providing cultural continuity. Interior designers who can be regarded or described as the space coaches, should answer the new life styles and problems with the innovative and progressive spaces they designed, they should also be sensitive to the social life and changing transforming structure of the culture besides the creative solutions.

2. A survey of Interior design education
The design is peculiar as well as it is general and it is subjective as well as it is objective. The characteristics of the design concept which covers all these complexities also reflect into the design education. The information and the techniques aimed to be given during interior design education should be evaluated in two groups as the information about design and the auxiliary information. The students are prepared for interior designing profession by developing their design abilities with the help of the courses such as seeing, perceiving, examining, developing ideas, application types, research and comparing techniques, analyzing-synthesis methods, theoretical expositions and experimental practical applications.

The essence of design education in interior design discipline is to help the students gain their abilities and experiences in an intellectual environment. This intellectual environment is the design studios for interior design students. Interior design studio classes are the chain of classes which are based on learner and instructor relation and critique system which aims at developing creative urge and problem solving abilities of the student at the
same time. These classes also include an application based period and they are the core of interior design education.

The qualitative criteria expected from the student to be gained in the scope of this class are:

1- The ability of bringing imagination, creative thinking, innovativeness and the leadership of design group.
2- The ability of collecting information, determining the problem, analytic and critical evaluation and formulizing action strategies.
3- Three dimensional thinking during the design seeking and the ability of discovering the design.
4- Bringing divergent elements together harmoniously, integrating the information and the ability of using skill while creating design solutions.

Although the content, project conductors and studio arrangements changed today, the importance of negotiations with the students and the interaction between the learner and the instructor remained same. In this approach which has been conducted based on conventional education system, the experiments of the student have been conducted in an hierarchical system from the top to the bottom. Dewey lists the opinions which form the base of conventional education concept in his book named "Experience and Education" as follow:

1- The topic and the content of education consist of the knowledge and skills which were benefited in the past; because of this reason, the main function of the school is to convey these to the new generations.

2- Behavioral standards and rules were also developed in the past. The aim of education is to form habitual behaviors consistent with these rules.

3- The organization of the school is very different from the other organizations in the society.

Briefly, the point emphasized by Dewey is that the aim in conventional education approach is to make the young get the knowledge integrals organized as education materials and get the prepared skill types. Thus, the young will overcome their responsibilities and will be successful in their future lives. Conveying the knowledge and the skills is provided by the teachers (Dewey, 2007). When we look from this point of view, we can see that there is a structuring from the top to the bottom in conventional structuring. Furthermore, the topics expected to be learned by the students are usually over the skills of the young or out of their interests.
However in the new education system the following opinions are suggested (Dewey, 2007);

1- The expression and development of individualism instead of top to bottom structuring.
2- Learning by experiences instead of learning from the texts or from the teachers.
3- Learning skills and techniques by means of direct applications instead of learning by exercising.
4- Maximum benefiting from the opportunities suggested by today’s life instead of preparing for the distant future.
5- The opinion of meeting with the changing world against the stably materials.

Designing and teaching how to design are very different concepts. The main goal here is to prepare an environment for learning how to design instead of teaching how to design as suggested in student centered education approach. When learner centered education opinion is accepted widely instead of teacher centered education opinion, this approach will be benefited better.

3. Creating awareness in interior design education

When design disciplines compared, it can be seen that the relation between the designer and the user is the strongest in interior design. May be because of this reason, only interior designers have a chance to work with the users, to make the designing process come alive and to direct it. Unfortunately interior designers who have a chance to work with the users and to direct the design project have not this kind of chance in their interior design studio classes during their education. In studio classes usually the plans belong to existing spaces are given to the students and they are asked to re-functionalize it or to solve the interior design problem of the given space with the same function.

In the scope of this study, 24 design brief which have been given to the students at the Interior Design Department of Anadolu University, Eskisehir were examined and it was determined that there are generally three tendencies. These are:

1- Creating the design brief with a different function by preserving the relations of the space with the current neighborhood and the city (50%),
2- Creating the design brief with a different function by changing /without preserving the relations of the space with the current neighborhood and the city (40%).
3- Creating the design brief with a different space solution by preserving the current functions of the space (10%).

Although the plans are usually given from the neighborhood according to the functions of the determined space, the student can not examine the real space since the problem has metamorphosed. Another important problem of this approach is that interior design students can never meet with the real users. Because of this reason, the students should just dream a lot of sociological, psychological and economic data. This approach which is used in Interior design studio classes appear as a basic problem when creating professional awareness and it is seen as an important problem which weakens the professional awareness.

Interior designers have responsibilities for shaping and orienting the society, solving the problems and being innovative with their designer identities in addition to their duty to increase the life comfort and quality. Because of these reasons, academical education of the interior designers gain importance and especially the contents and application types of the studio classes which are the cores of interior design education become much more important.

We meet with a lot of events in our daily lives. We are aware or unaware of these events. We can usually understand these events when their results effect us negatively but it is usually too late at that point. It is nearly the same in professional education. Professional awareness starts after the beginning of professional life. During the academical education, the experiences disconnected or different from the real life are given to the students and the students become late for facing with the realities of the life.

In the scope of this study, 85 interior designers were interviewed too and it was also determined that the students gain professional awareness after graduation and after starting professional life. When the reasons of this problem was questioned, the interior designers expressed that they were far from professional awareness during their educations as they were not given a chance to do the real application projects (92%). This approach which takes place in traditional education insight destroys the experimentation opportunity of the interior designer candidate and it tries to develop creative dimension just by dreaming. However, professional awareness appears as an important concept today and it drastically supports the experimental dimension of interior design education.

Awareness is the main concept of Gestalt’s theory. Consciousness and awareness include all aspects of our lives, our emotions and thoughts, our relations with the events around us (Çüceloğlu, 1993). Awareness means knowing the reality about ourselves, it means seeing, feeling and understanding our talents, skills, our limitless potential and the barriers
created by ourselves. Especially the design education should increase the awareness of students by forcing the borders of creativeness and by providing the opportunities for experimental studies. However, the existing situation is the opposite of this. We all know that designing cannot be learned from the educational books. The project topics and the methods of project classes are the main factors that provide professional awareness and unique style to the students in interior design classes. At this point, it is possible to evaluate Rowe’s architectural design description. Rowe regards architectural designs as questioning and seeking tools which shape and realize the ideas related with the buildings and accommodations where people live in. At this point, the “space” concept has already left its place to the “place” concept which also include the human being. After this description, solving problem in architectural design is only possible by determining the problem properly.

The important point in interior design education is to provide a connection between the interior designer and the real user during the introduction of the problem process. The identity of the place appears as an important problem in connection with the identity of the user. Creating professional awareness especially in the interior design studio classes during the education period also brings the importance of interior design at the cultural sustainability point. Thus the students will have the opportunity to face up to the real user profile during their education process instead of suggesting creative solutions to the imaginary users’ problems. Perhaps they will be the guides in the society with the innovative and experimental places they design.

4- Conclusion
It is the truth that interior design education cannot be learned from the books. However, the new century brought the new opportunities and probabilities. The new student type can reach the information easily, can control the new communication and visualization tools and equipments, they are creative and impassioned. Because of these reasons conventional design education concept should be revised, learner centered education techniques should be followed instead of teacher centered techniques, the students should provide opportunities for creative problem solving with the real spaces and real users in order to increase professional awareness as the main education concept in interior design education. The main goal should be preparing an atmosphere for learning how to design as in the student centered approach.
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AN EXPERIENTIAL LEARNING JOURNEY: BASIC DESIGN STUDIO

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Abstract
Design studio has always been the major interest of design education research. In time, by the change of world through social, economical, psychological, technological developments, new trends have been brought up, new systems have been utilized, new terminologies and theories have been integrated in the curriculum of design education. Especially technological developments have a great effect on the structure of design studio as the formation of a new studio experience through CAD process, virtual studios etc. Despite these entire changes and developments design studio is still the core of the curriculum in design education and functions as a communication center for its participants through reflection in action. Experiential Learning Theory describes learning as a continual cycle beginning with experience, continues with reflection followed by abstraction and later leads to action that becomes a concrete experience for reflection. Previous research indicates that, the learning process in the design studio setting is considered as a model for Experiential Learning Theory (ELT) of Kolb in which different phases of the design studio could reflect different modes of the learning cycle. Especially in Basic Design Studio the experience through a series of different learning activities is crucial since the preliminary aim is to develop the perceptual skills of design students through an analytical and abstract way of thinking for gaining a global common language as design. Moreover they are taught how to transfer this abstract conceptual idea to a concrete design product through some externalization methods. In the process of transferring the concept to a design, experimentation is one of the most important keywords for Basic Design Studio.

In this context, it is aimed to make an overview of the Basic Design studio process of the Department of Interior Architecture and Environmental Design at Bilkent University by figuring out the experiential process of learning through experiencing, reflecting, thinking, and doing in the different phases of the studio activity. Besides, in the scope of this study, the distribution of the basic design students in the learning style type grid of Learning Styles Inventory (LSI) will be figured out. Also the perception of basic design students for different learning activities in the process will be evaluated according to the learning styles of the students.

Keywords: design education, basic design, experiential learning, learning styles, design studio.
AN EXPERIENTIAL LEARNING JOURNEY: BASIC DESIGN STUDIO

Introduction
Although the understanding of the process of learning has been one of the main issues of educational research for the last decades, design education has rarely been the interest of these studies. Nevermore, there are many different researches on design education and the studio process; only few of them focus on the effects of learning styles of design students within the design studio process (Demirbas and Demirkan, 2003, 2007; Kvan and Yunyan, 2005, Durling et al., 1996, Newland et al., 1987).

According to Kolb’s (1984) Experiential Learning Theory (ELT) learning is defined as a continuous cycle that begins with experience, continues with reflection and leads to the action, and this becomes a concrete experience for reflection. Previous research showed that design studio process could be considered through ELT (Demirbas and Demirkan, 2003, 2007; Kvan and Yunyan, 2005). In this scope, this study aims to discuss the basic design studio process as a concrete model for ELT.

Basic Design Studio Process
Ruedi (1996) proposes that design serves as a mediator between invention (mental activity) and realization (social activity) in which as Verma (1997) states there is an open-ended process of problem solving through design theory that functions as an instrument theory supporting the cognitive abilities of the designer. For that reason more than facts and rules which could be taught by instruction, the extent of the experience of the design student is more important (Demirkan, 1998). Design studio is the first place that the candidate can get this first experience and extend it. Design studio could be considered as the most important part of design education since it is the core of the curriculum where all the other courses are related to it (Uluo˘gulu, 1990, 2000). The primary aim of the design studio is not just to teach how to design but to develop an understanding of what the design and design activity are, through a creative and analytical way of thinking. Uluo˘gulu (2000:34) claims that design activity is more than an act of doing in which the activities should be conscious, selective and intelligent rather than just being impulsive, habitual and coincidental. Design education could not be considered as the educational process of designing as an activity through the provision of the necessary technical skills, but primarily related to thought development, subjective development, finding out solutions for wicked problems, using reasoning models etc. (Chastain and Elliot, 2000; Verma, 1997).

Design students are expected to construct a basis for the rest of their design education process and even for their future professional careers through
basic design. For that reason Basic Design Studio has an outstanding position among the other design studio courses. It is the first place that the design student will experience the processes that are discussed above. Basic design studio introduces totally a new world for the student with it own values and behaviors (Anthony, 1991). Within the basic design studio process, students are expected to develop their own set of values and attitudes which will last during their design education and even throughout the professional life (Farivarsadri, 1998).

Consequently, the educational experience in the basic design studio can be considered through three simultaneous and interrelated stages as; learn and practice some new skills, learn and practice a new language (Schon, 1984), and learn the way of thinking as Ledewits (1985:2) explains it referring “to a particular domain of problems and solutions that characterize, and are fundamental to, professional performance”. However, it is a hard work for a beginner student to start learning these stages immediately since s/he will face with difficulties in understanding what is said and/or expected by the design instructor. On the contrary it is also hard for the design instructor to communicate with someone who is unfamiliar with the process of designing (Schon, 1987). From an epistemological level, the organization of necessary knowledge and the ways of presenting this knowledge which will be accessible for every student is very important. In that sense basic design studio is concerned with various learning paradigms.

Schon (1987) discusses two ways of interaction in the studio as telling-listening and demonstrating-imitating. Both telling-listening and demonstrating-imitating actions are continuous and reciprocal between the design student and design instructor. Schon (1984, 1987) states this communication process as reflection-in-action which develops itself through a spiral way of action. The student reflects on the action of the instructor and the instructor reflects on the action of the student consequently. Reflection-in-action formulates the general structure of design studio process in which understanding the learning process of design students is quite critical for educational improvement (Demirbas and Demirkan, 2003).

**Experiential Learning Theory (ELT)**

The processing of new information through an internal and mental approach that differs from individual to individual could be defined as learning. The way(s) of perceiving and processing new information could be stated as the learning styles of the individuals (Kolb and Kolb, 2005a, b).

ELT considers learning as a circular process that starts with experience, continues with reflection and conceptualization that leads to an action. In this circular model, there are four learning modes which formulate the cycle of learning (Smith and Kolb, 1996; Kolb, 1984). These are concrete experience (CE, learning by experiencing), reflective observation (RO,
learning by reflecting), abstract conceptualization (AC, learning by thinking) and active experimentation (AE, learning by doing). Along this cycle, the four learning modes expose two bipolar dimensions that are concrete/abstract and active/reflective dimensions (Willcoxson and Prosser, 1996). According to ELT, concrete/abstract dimension refers to the perceiving of new information while active/reflective dimension refers to the processing of new information in learning activity. The combination of the tendency of learning either through experiencing (CE) or construction of theoretical frameworks (AC) with the tendency of learning through reflection (RO) or learning by doing (AE), shows the individual’s common learning tendencies (Kolb, 1984). In the scope of ELT, an individual’s learning style is figured out by identifying his/her position on each of the bipolar dimensions through the test called Learning Styles Inventory (LSI). The position of an individual on each of the bipolar dimensions corresponds to one of the four learning styles defined in the scope of ELT; namely, accommodating, diverging, assimilating and converging. Accommodating learners are generally fond of hands-on experience learning through doing things. They are more action-oriented and generally rely on others for information instead of their own analysis. Diverging learners prefer observing rather than taking an action. They have the tendency of considering concrete situations from many different points of view but they are usually not fond of theories and generalizations. They usually like to generate a broad range of ideas such as brainstorming. Assimilating learners are more interested in abstract ideas and concepts rather than concrete experiences. Theory should have reasonable soundness instead of their practical value for assimilating learners. They prefer to experience concrete situations in a more symbolic way and the information is transformed through thought. Converging learners’ tendency is dealing with things rather than others’ experiences. They are best in finding practical applications of ideas and theories. They are fonder of technical duties instead of social and interpersonal issues. They have the ability of solving problems and making decisions over find out solutions of the problems. Accommodating versus assimilating learners and diverging versus converging learners have opposite learning strengths (Hsu, 1999; Kolb, 1999).

Case Study
In the scope of the previous discussion, the process of the Basic Design Studio of Interior Architecture and Environmental Design Department at Bilkent University was considered as a model for ELT. The syllabus of the course was revised in a way that all modes of ELT were aimed to be utilized either in different phases of a single exercise or through different successive exercises within the program. In this sense, together with traditional design
problems, some other teaching and learning methods were integrated to the program as lectures, research assignments, site visits and observations, workshops etc. By this way together with learning by doing, it was also aimed to orient the students to experience, reflect and think on the assigned problems. Since one of the main criterions in Basic Design Studio was to develop an abstract way of perceiving the environments, all through the studio process, students were asked to study concrete issues/states first, then make an abstraction of these and finally through this abstraction process come up with concrete design products. In this process, students faced with different learning activities consequently that would help them to find out the solutions of design problems from a wider perspective. In this context two different sets of the exercises that were handled will be discussed.

At the very beginning of the course before asking students to design anything, it was aimed to make them to be aware of the conceptual understanding of design by starting with the concept of “pattern”. The initial stage of this exercise was the realization of the concept through a site visit. After a brief description on the concept of pattern, students were asked to find out and photograph some natural patterns from their environment. Later they were asked to bring the photographed pattern examples to the studio for discussion. In this stage, students were asked to present their examples to their peers and a free discussion on each example was handled. Through the discussion phase they were asked to evaluate the examples according to the previous information on pattern that they had given. After this stage they were asked to work alone and try to figure out the common geometries from their pattern examples by putting a transparent paper and marking the geometries by pencil. In the next stage a detailed lecture was given on the concept of pattern and texture by giving natural and built environment examples. By the termination of the lecture they were again assigned to make the geometrical analysis of one of the selected pattern photographs by a tracing paper and pencil, but this time they were informed that they should have figured out the regular geometries out of the natural pattern example. After this analysis they were asked to imitate the pattern by copy and paste method on A4 format paper by using white paper for background and black thick paper for geometric shapes. In the next stage this time instead of imitating the existing they were asked to create a new pattern by using the same geometric shapes that they had figured out from the previous application. Following by a detailed lecture on the concept of “color”, this time, students were asked to repeat the previous exercise by color. During this process studio discussions were handled on each product and by the termination of the exercise students were asked to present all of the products of the exercise in a sequential order and a review was handled (Figure 1).
Second exercise was again a two dimensional exercise but this time the size of the design field was enlarged and students were asked to organize the regular geometric in a way that they would be no longer just patterns but a representation of an organization. In the initial phase students were asked to work with black and white papers. After then a detailed lecture was given on the concept of “organization” and students were asked to repeat the previous stage again with the new information that they had acquired from the lecture. In the next stage, color was added and lastly they were asked to do the same organization with single color but this time adding up the depth factor by creating a relief version of their organization product. By this way both three dimensionality was introduced and they had the chance of experiencing two different perceptions of the same design product. Later as a complementary exercise students were asked to find out organization examples from built environment and abstract these examples by figuring out the regular geometries and create a unique new organization by the found out geometric shapes as a colored two dimensional work and a colorless relief work (Figure 2). Figure 2. 2D and 3D organization studies from built environment examples. The second selected exercise set to be presented in this study was from second semester in which human dimension, user factor, scale, proportion, structure and space in addition with the previous knowledge of design principals and methods were the subject of attention of the studio. In the first phase students were assigned to learn about their body dimensions by working in groups of two. While studying their body dimensions they were asked to draw the contours of their bodies in three different postures in full scale on brown drafts paper. Then they were asked to use any part of their body such as hand, foot, head etc. as a measuring unit. By this
way they figured out their body dimensions by using their own measurement unit (Figure 3). After this stage, students were asked to make research homework and prepare a presentation board on human dimension and privacy requirements. Besides they were also asked to experience and note different interaction distances between humans in different spaces such as in a queue of ATM machine, in bus etc. After this a detailed lecture was given on the concepts of “scale, proportion, human dimension and privacy dimension”. As the last stage of this exercise students were asked to construct a spatial skin for themselves in full scale that would be a visual representation of the invisible personal space bubble of them. This stage was handled in two steps, first they constructed a 1/5 scale model of the spatial skin and got feedback from the design instructors and then they constructed the spatial skin as a costume for themselves. The primary requirements of the project were that it should be appropriate to put on their bodies, they could easily move with their spatial skin on their bodies and it should represent their personal space. For the review phase students were asked put on their spatial skins, and go out the studio, walk around the faculty and interact with other people (Figure 4).

At the end of the semester a survey was carried out by 60 volunteer freshman students from the basic design studio. They were asked about their satisfaction level and comments on the basic design process that they had just experienced. According to students’ comments it was figured out that although the process of the basic design studio was stated totally as

![Figure 3. Analysis of body dimensions.](image)

![Figure 4. Review of “Spatial Skin Project”](image)

a new experience for all of the students they did find the process satisfactory and useful for their learning preferences. They were asked to rate how adequate the basic design studio process was between 5 (totally adequate)
to 1 (not at all). About 72% of the students claimed that the learning process in the basic design studio was adequate to their learning preferences while 6% stated it was totally adequate and 11% mentioned that they were not sure about how adequate the process was according to their learning preferences and expectations. None of the students mentioned an inadequate situation.

Students were asked to evaluate this new learning process comparing with their previous education experiences as an open-ended question. Almost all of the participants mentioned that when comparing with their previous educational process, learning experience in the basic design studio was totally different and new for them. Although they felt difficulty during the semester, they found the process quite useful for learning. Students claimed that by the basic design studio process they have started to observe everything around them from a different and wider perspective. Basic design studio helped them to gain some new skills about problem solving, analyzing and conceptual way of thinking. All of the participant students mentioned that learning by doing is the most useful part of basic design studio. They have also mentioned that the process of analytical thinking and decision taking for the appropriate action till the activity of doing or experimenting was also a significant outcome of the basic design studio. Almost 50% of the students mentioned that after each basic design class, they were looking around to find out some examples of the things that they had learned in the studio. One of the students claimed that basic design studio was too much conceptual and abstract in the sense that it was sometimes difficult to relate the theory with application. All of the students claimed that although sometimes they were confuse with some exercises during the process termination of the process, they could easily relate each stage and exercise with each other as a continual and interrelated learning activity. One of the respondents had graduated from an electrical engineering program just before being a design student and his comment was quite interesting. He claimed that at the very beginning it was not acceptable for him to deal with a problem that had limitless solution opportunities after an engineering education in which the basic intention was to reach the constant and concrete answers. However through the semester he realized that this way of learning made him more flexible and creative while thinking of the answers of the problems and his analytical skills has been developed by the end of the semester. All of the participants agreed that the educational process within the basic design studio enhanced their perception of environment.

Students were also asked to rate the methods of learning that they utilized during basic design studio. The results showed that the most widely used method was assigned as learning by doing (M=2.85 SD=1.92) and experimenting (M=2.58 SD=1.80) which was considered to be quite
acceptable and valid when comparing with the answers of the open ended question.
The distribution of the participant students in the learning style type grid of Kolb (1999) was also figured out through LSI test. Interestingly, although the most widely used method of learning was found to be learning by doing in the other questionnaire, the results of the LSI test showed that most of the participants learning tendency was more towards the learning by reflecting instead of learning by doing in the process axis. As expected the general tendency in the perceive axis was found towards learning by thinking instead of learning by experiencing. According to the learning styles distribution of the students 43 students (71.7%) were assimilating, 10 students (16.7%) were diverging, 5 students (8.3%) were converging and only 2 (3.3%) were accommodators. This result was considered as reliable since the location of architectural specialization was found to be between abstract conceptualization and reflective observation as assimilating (Kolb, 2005). Moreover, previous research in design education also revealed that assimilating and converging learning styles were the dominant learning styles among the students (Kvan and Yunyan, 2005; Demirbaş and Demirkan, 2003, 2007).

Conclusion
Although the limited number and a very constant profile of the participants averted from making further statistical analysis, the found out results were found to be quite sound and satisfactory. The general satisfaction levels of the students at the end of the process and their comments about the process could be considered as a valid result for the assumption of considering the basic design studio through ELT. Although the result that the most favored method is learning by doing while most of the students are assimilating learners (more utilizing learning by reflecting and thinking) seems a bit confusing, it does not show an inconsistency. ELT states that in a hypothetical point of view, the learning activity will be most successful when all four modes of learning will be experienced equally. So, the primary aim is not fit the structure of the course according to the learning styles tendency of the student group but provide a learning environment which will be suitable for all learners with diverse learning strengths and weaknesses. In that sense the application in this study is found to be successful. To conclude it is believed that ELT is an appropriate model for basic design studio process that will provide opportunity for better teaching and learning situations in design education.
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THE BURDEN OF BEGINNING: UNDERSTANDING THE MIND OF THE NOVICE THROUGH A MODEL OF INCOMPETENCE

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ABSTRACT

It is impossible to imagine a more universally shared experience than that of being a beginner. It is a state we relive countless times throughout our lives. The general conditions of being a novice are constant, for example the robust ignorance of the true beginner and the resulting failure of judgment and the inability to reflectively discriminate between good and bad decisions. These, and other, aspects of behavior and thought work together to create the burden of beginning. These features of the beginner’s mentality are strongly patterned and describe a state of incompetence. The structure of these features of thought and action that define the nature of beginning raise interesting and important questions about how we currently teach beginners and how these practices might be radically and productively changed.

In 1999 American psychologists Justin Kruger and David Dunning performed a series of studies on incompetence that came to some provocative conclusions. Their research suggested that the defining characteristic of an incompetent individual is their inability to recognize their own incompetence. “… when people are incompetent… they suffer a dual burden: Not only do they reach erroneous conclusions and make unfortunate choices, but their incompetence robs them of the ability to realize it. Instead…they are left with the mistaken impression that they are doing just fine.”1

What Kruger and Dunning are describing is the normative state of many beginning design students. The novice is not surprisingly unaware of what they don’t know. The inability of beginners to detect the errors in judgment that logically follow from this simple observation are also consistent with Kruger and Dunning’s findings that in the absence of information to the contrary the incompetent will frequently come to a positive, or at least neutral, conclusions about the product of their efforts. Too often the structure and intentions of beginning design pedagogy seem to work to suppress awareness of the failure of judgment. The evidence of this is in the tightly controlled and implausibly refined nature of so much beginning design work. Strategies that relieve the student of the responsibility for exercising judgment, good or bad, merely prolong and reinforce their underlining incompetence. Kruger and Dunning’s work suggests that cycle of incompetent performance and developing the metacognitive skills of novices
can alter judgment. This finding has interesting implications for how we teach beginning design students.

This paper will examine the questions raised by Kruger and Dunning’s research on the structure of incompetence and its implications for how we teach the beginner. We cannot avoid incompetence, as it is the condition of being a novice, but we can work to create greater understanding in the beginning design student of role of critical judgment in the creative act, and the confidence to exercise that judgment. This is a critical issue for a field in which we are beginners for such a long time.

THE BURDEN OF BEGINNING: UNDERSTANDING THE MIND OF THE NOVICE THROUGH A MODEL OF INCOMPETENCE

Introduction
It is impossible to imagine a more universally shared experience than that of being a beginner. It is a state we relive countless times throughout our lives. The general conditions of being a novice are constant, for example the unflinching ignorance of the true beginner, the unavoidable failure of judgment and the inability to reflectively and accurately discriminate between good and bad decisions. Beginning is a kind of blindness. These aspects of behavior and thought work together to create the burden of beginning. The features of the beginner’s mentality define incompetence. The structure of thought and action associated with beginning are strongly patterned and predictable. On examination they raise interesting and important questions about how we teach beginning designers and how these practices might be radically and productively changed.

Seeking Error

“It is as certain as it is strange that truth and error come from one and the same source; for that reason one must often not do something to the detriment of error since one would do also something detrimental to truth.”¹

In 1999 American psychologists Justin Kruger and David Dunning performed a series of studies on incompetence that came to some provocative conclusions. Their research suggested that the defining characteristic of an incompetent individual is their inability to recognize their own incompetence. “… when people are incompetent… they suffer a dual burden: Not only do they reach erroneous conclusions and make unfortunate choices, but their incompetence robs them of the ability to realize it. Instead…they are left with the mistaken impression that they are doing just fine.”² Kruger and Dunning go on to observe that not only are incompetent people unable to detect the error in their judgment, even after the error is revealed to them, but they consistently overestimate their performance.
They are unable to accurately calibrate their judgment even in the presence of examples of competent work.

“Although their test scores put them in the 12th percentile, they estimated themselves to be in the 62nd. Several analyses linked this miscalibration to deficits in metacognitive skill, or the capacity to distinguish accuracy from error. Paradoxically, improving the skills of participants, and thus increasing their metacognitive competence, helped them recognize the limitations of their abilities.”

What Kruger and Dunning are describing is the normative state of many beginning design students. Novice designers are, not surprisingly, unaware of what they don’t know. What is surprising, however, is when they are able to discuss their work at all, they do so with remarkable certitude.

“It has been interesting to notice over the years, and I’ve often been a little envious of the fact, that architectural students seem to operate in an atmosphere of high certitude as they go about the business of building design. This confidence is of course not monolithic, but they exhibit very few disabling doubts.”

It is at this point that Kruger and Dunning’s work on incompetence directly touches the structure of much beginning design education. To anyone who has taught beginning design students, the presence of such ignorance, the inability to make good decisions, the inability detect bad decisions, and the stunning overestimation of the quality of personal work, may be the single most predictable set of behaviors associated with first year students. This in itself is not the problem. The problem begins when faculty confronted with these behaviors conduct instruction in ways that suppress the awareness of failures of judgment, and their consequences, but removes the possibility of failure itself. These strategies work to deny the student opportunities to exercise much judgment at all. The evidence of this type of strategy is in the tightly controlled and implausibly refined nature of so much beginning design
work. The presence of this type of work raises the question as to whom this work actually belongs. Is this the work of the faculty done by unwitting proxies or the work of incompetent novices?

“Looking at representative samplings of student design work it is not difficult to decide that a large majority of architectural students (to say all students would of course be going a bit too far) but in numbers high on an asymptotic curve, approaching totality, that these students all appear to design buildings in exactly the same way. There is a pervasive, almost cloned, similarity apparent in the design work and in the design procedures that students employ in just about every American architectural school. The buildings look the same, the graphic techniques look the same, the explanations offered are the same and the specialized language that surfaces during critical discussions is as though tape recorded from a central architectural concordance. In all respects a remarkable sameness prevails...”

There are many reasons for structuring beginning studio work in proscriptive ways. Primary among them is the view that beginning design studio is a place for skills training. Skills defined, of course, as technical abilities. The work focuses on things that can be objectively evaluated against standards. The introduction to the uncertainties and ambiguities of the design process are postponed while work is focused largely on transcription and rule-based exercises. Other reasons may not be always be as deliberate, but act to reveal a reflexive defense on the part of faculty. This type of work guards against being overwhelmed by the noisy visual and intellectual mess made by incompetent beginning designers designing incompetently. This may explain why first year studios are so often viewed and discussed as management problems as much as a pedagogic challenge.

Approaches to foundation studios that focus on rule based control of the process and products act, either deliberately or inadvertently, to relieve the student of the responsibility for exercising judgment, good or bad, and
consequently deny them any practice in the iterative, trial-and-error, process of decision making. The dilemma is that this structure merely postpones the inevitable spasms of poor and uninformed judgments, and the awkward, uncertain, empty, and ugly work that it produces. In other words, overly proscriptive work only acts to prolong and reinforce the beginner’s underlining incompetence. It does so by creating an illusion of self-directed process and false resolution. It also reinforces in the mind of students who are already well conditioned to view education as a passive activity, that design is just another a passive thing, something initiated by others and executed in a logical and linear way by the student.

On these points hang the question as to what our expectations and ambitions are, as educators and practitioners, for the practice of architecture in the coming critical decades. Is our mission to train people who are expert at following instructions or our we educating independent, curious individuals whose thinking, idealistically, ethically, and technically, will be synthetic, generous and supple enough to deal with the urgent problems facing man and the environment?

Some Consequences of Instruction

The first ideas about the connection of Kruger and Dunning’s model of incompetence and design education came in a graduate seminar on theories of representation. This was a class of graduate architecture students that were given the seemingly simple assignment to leave, make something, a drawing or an object, that they would like to discuss in ways other than description, and bring it to the next class. The students returned the following week with nothing. They were asked to explain how people who have spent so many years in design school could find this exercise so confounding. Their response centered on the absence of any specific instructions regarding the subject of the exercise, it’s purpose, and the means, and methods that were to be used to produce it. They were informed that if that information had been provided that the resulting work would belong to the professor and not the students. The students’ reply was that they were not accustomed to doing things for which they were responsible for defining the subject and where they were not given more explicit
instructions on how to proceed.

This surprising episode led to a series of informal surveys conducted over several years, at different schools, and with both graduate and undergraduate students. The intent of this brief, short answer, questionnaire was to get some sense of the static state of the student’s position on architecture, given their year level, and evidence of some reflective or retrospective understanding of their education. The questions have been modified slightly year-to-year, but they are essentially as follows:

1. What is the purpose of architecture?
2. What are the responsibilities of architecture?
3. What distinguishes architecture from building?
4. How do you begin to design something?
5. Please produce a diagram that represents the anatomy of your design process.

While this instrument and its interpretations have no illusions of scientific rigor, the results do suggest interesting threads that connect to Kruger and Dunning’s work. One of the most pronounced characteristics of the responses, particularly to the first through third questions, was their stereotypical nature. The first round of answers, across all groups are typically clipped and chilly declarations such as: “Architecture exists to serve human needs by providing shelter, comfort, protection for its inhabitants, and ennobling everyday life.” While perhaps true, it hardly seems a manifesto up to motivating five or more years of study, much less a career. With few exceptions, the answers of the first trial always have this sense of the rote. They seem clearly the reflections of what they’ve been told, or lead to believe, architecture is, but lack any traces of the struggle inherent in answering such a question. In fact, their answers suggest that the question has really never come up.

This first iteration is sent back for reworking and rethinking over the course of the term. The more these questions are explicitly asked, the greater the students awareness of the gap between what is said about their work and what is seen in their work. They all struggle - some giving up - to develop
some clarity about the things they know, the things they suspect, and the things they don’t know, and were those thresholds exist. The critical discussions of these positions help make them also aware of the stylized fiction that characterizes so much of the public discussions of work. This leads to the much harder, and less facile, truth about the subject in which they’re engaged.

This inability of design students to articulate an explanation of what they’re learning how to do, and why that knowledge is important, seems quite odd and troubling. In other words, many students are unable to formulate a compelling and genuine position on what they do, why it’s important, and why they do it. At the same time, however, they sense that what they do is important; after all, they are attending a professional school of design. But they demonstrate a remarkable aphasia when asked to explain why it is relevant, important, or meaningful. As in the Kruger and Dunning study, the students’ profound silence on the subject of intent and position has little effect on their evaluation of their work, which they often characterize as successful or “working,” whatever that means.

It is difficult to imagine this paradox sustaining itself without the implicit aid of the system that teaches them. This cognitive hole is made deeper by an expanding body of often superficial, over-directed, work. These projects seem to be increasingly the products of the technical apparatus that supports the students’ training. The students’ ignorance about there own criteria for judging the success or failure of their efforts, their inability to critically calibrate theirs, and other people’s work, seems to have no appreciable effect on their inflated self-assessments. This asymmetric condition, where the product exists without any discernible supporting position about why it exists, seems a plausible consequence of a reductive educational process focused on narrowly defined problem solving.

**On Becoming Competent**

“Prediction 4. The incompetent can gain insight about their shortcomings, but this comes (paradoxically) by making them more competent, thus providing them the
Kruger and Dunning demonstrated that competence could be gained by making the subjects aware of the specifics of their incompetence, in other word the specific nature of their error. They used tasks involving grammar, logical reasoning, and humor as the measures of competence. In the first two studies involving grammar and logical reasoning, the ability of incompetent subjects to recognize the nature of their errors, thus improving their competence, was achieved through focused training on the task at hand. Those performing poorly on the logical reasoning task were trained in methods that allowed them not only to perform better on the test, but also revealed to them the nature of the errors they were making. The focused training increased the subjects’ metacognitive skills, or more simply the person’s ability to recognize and accurately judge their performance. These increased met cognitive skills, the improved calibration of the subjects judgment, lead to greater competence.

These results are very interesting but are strongest where the tasks are associated with well-structure knowledge. These are domains of knowledge that are fact based, or structured by well-ordered rule systems, such as logical reasoning and grammar systems. The results on the subjective and idiosyncratic topic of humor were less conclusive and data on the effects of metacognitive training on a subject’s ability to judge what’s funny was not collected. This is an unfortunate omission, since it is precisely the ill-structured, idiosyncratic, and subjective nature of the knowledge required to perform competently as a designer, that would resist the metacognitive training that was used to increase competence in poorly performing research subjects.

If simple instruction and rule based methodology were all it took to improve the accuracy of design students’ assessments of the quality of their work, or increase their understanding of the successes or failures within their work, architecture school would be a lot shorter. It’s precisely the resistance of incompetence associated with highly subjective and ill-structured tasks to reductive and over-controlled instruction that makes teaching beginners so
challenging and critically important. The failure to address early on the
difficult and time consuming work of learning how to exercise good judgment
within the subjective and poorly structure knowledge domain of design leads
ultimately to the inarticulate positions and poorly calibrated judgments that
so many design students carry well into their academic careers. Kruger and
Dunning make reference to the underlying complications that effect the
mechanisms of incompetence and should sound very familiar to design
faculty:

“One puzzling aspect of our results is how the incompetent
fail, through life experience, to learn that they are
unskilled. Although our analysis suggests that incompetent
individuals are unable to spot their poor performances
themselves, one would have thought negative feedback
would have been inevitable at some point in their
academic career. So why had they not learned? ...even if
people receive negative feedback, they still must come to
an accurate understanding of why that failure has
occurred. The problem with failure is that it is subject to
more attributional ambiguity than success. For success to
occur, many things must go right: The person must be
skilled, apply effort, and perhaps be a bit lucky. For failure
to occur, the lack of any one of these components is
sufficient. Because of this, even if people receive feedback
that points to a lack of skill, they may attribute it to some
other factor. Finally, ...incompetent individuals may be
unable to take full advantage of one particular kind of
feedback: social comparison. One of the ways people gain
insight into their own competence is by watching the
behavior of others. In a perfect world, everyone could see
the judgments and decisions that other people reach,
accurately assess how competent those decisions are,
and then revise their view of their own competence by
comparison. However, ...incompetent individuals are
unable to take full advantage of such opportunities.
Compared with their more expert peers, they were less
able to spot competence when they saw it, and as a consequence, were less able to learn that their ability estimates were incorrect."

What is important to consider about these observations is that the awareness of ones ignorance and the recognition of judgmental error only evolves, paradoxically, if the beginner is allowed to pursue tasks in their state of blissful, or at least unavoidable, ignorance. They must be allowed to fail. As noted above, failure is a more richly ambiguous event, psychologically speaking, than success. Within failed work there is important and useful evidence that reveals a kind of taxonomy of error. Understanding these patterns and habits of thinking, judgment, and action are necessary in order to vividly reveal to the student the structure of their ignorance and the sources of their incompetence. While, for many, the simple notion of trial and error as a powerful learning paradigm is not a debatable point, it then raises the question as to why we don’t see more awkward, ugly, and uncertain work presented and discussed at beginning design conferences. The knowledge of this work is also valuable to the development of beginning design curricula that can resist the persistent cycle of incompetent performance and judgment that extends deeply into the later years of school. These approaches to teaching beginners would focus on the building of reflective metacognitive skills that are necessary to gain competence and critical awareness. These approaches to teaching would supplant methodologies that circumvent the awkward painful uncertainty of beginning design and rob the student of a critical source of knowledge. This shortcut ultimately delays the foundation of an earned confidence in both their thinking and their work.

**Conclusion**

We cannot avoid incompetence, as it is the condition of being a novice, but we can work to create greater understanding in the beginning design student of the anatomy of the creative act. In the end, the student must earn an early confidence in their nascent ability to detect failures of judgment and to work in ways that improve their decision-making skills. These skills are in many
ways the defining characteristic of professional practice, the exercise of good judgment, and are critical skills for a field in which we are beginners for such a long time. As architecture faces urgent issues of sustainability, social responsibility, and global issues concerning the quality and humanity of the built environment our inability to instill a sense of moral imagination and foster a principled idealism in architecture students will solidify the growing irrelevance of the profession. The only comfort is offered by Kruger and Dunning’s prediction that we will be unaware that anything has happened.

1. Johann Wolfgang Von Goethe, Art and Antiquity, III, 1 (1821)
ONCE UPON A TIME, THERE WAS A STORY IN THE NAME OF DESIGN

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ABSTRACT

The first year at university can be defined as an adaptation period for the student. In this period, the student tries to get familiar with his/her profession, in addition to the physical and social environment. Within the scope of Interior Architecture Project courses, the students are included in a learning process in which they learn a number of concepts which are the basis of the profession with participatory education techniques.

In the first part of the study, the process followed in Karadeniz Technical University Interior Architecture Project-I course and the skills that the students are expected to acquire as a result of this process are specified. The second part of the study includes the scope, target, application equipment, application types and application examples of the studies carried out in the process.

In the final part of the study, the progress of the process and the planned changes and suggestions about the application methods for coming periods are discussed. In addition to the evaluation method and the determination of evaluation results, the progress of the process and the planned changes and suggestions about the application methods for coming periods are discussed.

Key Words: Design Education, Design, Design Approaches, Creativity
ONCE UPON A TIME, THERE WAS A STORY IN THE NAME OF DESIGN

As a Beginning…

The unbelievably rapid development of technology today led to the increase in communication opportunities and thus resulted in inter-cultural interaction. This process which is defined as “globalization” with a popular saying has changed and developed social consciousness habits and expectations. The provision of conditions for mental and physical comfort for human living in social, natural and artificial environment is one of the sie qua nons of the modern life. These demands, which are produced by humans, can only be met by the professional approaches and applications of different disciplines which keep up with the necessities of our age.

In the study which was carried out with this perspective, within the scope of the concept of education which is the origin of every kind of applications, the method in the Karadeniz Technical University, Department of Interior Architecture, First Year Semester Project course is analyzed.

Once Upon a Time…

Education is defined as the whole of the activities carried out for the objective. “To educate” is a long series of definitions, which range from “an intervention to the life”, “determining the perspective of life by informing and influencing value judgments and beliefs”, “providing a better understanding of life and “expanding the horizon of humans” to “adding pleasures to the life” and “shaping the society”. These definitions can be multiplied in hundreds of different versions. Although education covers a certain period, it is a short-term learning method.

Teaching is quite similar to education; these two concepts are generally misused. It is an informing activity provided by an individual or by an organization. It is the function of transfer of information by the people who knows, to the people who do not. Informing, in general terms, is the activity of giving information about something. Developing is carried out with the purpose of providing a detailed acquisition of an activity. It is a long-term activity and requires life-long effort.

Teaching and learning relationship has a structure which can contain many different education methodologies.

For example, Multi-Intelligent Learning employs the following educational methodologies, which have been used successfully in studio environments, (Gardner, 1999a), (Table 1).
The Teaching for Understanding Framework; provides a comprehensive approach for planning “learning outcomes” and “curriculum”. Teaching for Understanding Framework educational methodology designed to assist teachers in course development. The starting point in teaching for understanding is to develop generative topics, topics that are central to a discipline, and understanding goals to provide focus to the instruction, (Perkins, Blythe, 1994), (Perkins, 1998), (Table 2).

Table 2. Teaching for Understanding Framework

The Entry Point Framework accommodates “individual differences” by providing multiple ways to introduce a topic or concept. An engaging point of entry piques the interest of students and invites them into the learning experience to delve more deeply into the subject matter, (Gardner, 1999b).
While certain entry points activate particular intelligences, a one-to-one correspondence does not exist between entry points and intelligences.
The Entry Point Framework offers seven points of entry into a topic, (Table 3).

**Narrative:** Introducing topic through “story-telling”. Narrative Entry Point (Gardner, 1999b) is a way to introduce a topic that engages students in learning through relating stories. “Linguistic”, “intrapersonal”, and “interpersonal” intelligences are activated through “verbal storytelling”, with additional intelligences activated through “symbolic narrative forms”, including “movies” and “mime”.

**Numerical:** Engaging learners through computation. Numerical Entry Point is a way to introduce a topic that offers students who like to deal with “numbers and numerical relations” the opportunity to learn through measurement, counting, listing, and determining statistical attributes of the topic being studied, (Gardner, 1999b).

**Logical:** Deducing cause and effect to learn “new concepts”. Logical Entry Point is a way to introduce a topic that allows learners to deduce the cause and effect of certain occurrences and “apply deductive reasoning” to understand the “relationships among various factors” involved in the study of a particular topic, (Gardner, 1999b).

**Existential/Foundational:** “Asking fundamental questions” to introduce topic. Existential/Foundational Entry Point is a way to introduce a topic that allows individuals to approach a topic through “addressing fundamental questions”, such as the “meaning of life”. Philosophical issues invite certain learners to engage on a deep level, which piques and holds their interest in studying a “particular topic”, (Gardner, 1999b).

**Aesthetic:** Engaging “the senses through artwork”. Aesthetic Entry Point is a way to introduce a topic that engages the senses through “works of art” that relate to the subject matter being studied. Also, concepts and examples have their own aesthetic properties, which can be examined and discussed in conjunction with the topic at hand, (Gardner, 1999b).

**Hands-On:** Physical manipulation to engage learners in experience. Hands-On Entry Point is a way to introduce a topic that engages learners in “constructing experiments” with physical materials or through computer simulations. Other hands-on approaches invite learners to learn by building or manipulating a “physical manifestation” of some aspect of the topic they are studying, (Gardner, 1999b).

**Interpersonal:** “Cooperative learning” to introduce “new ideas”. Interpersonal Entry Point is a way to introduce a topic that engages learners “with each other” so that they can interact, cooperate, work together, or alternately debate and argue with each other. Students “learn from each other through group projects”, in which each student contributes to the overall effort, (Gardner, 1999b).
Table 3. Entry Point Framework

Multiple Representations offer “a family of representations” rather than a single representation that is considered to be the best. This approach allows students to choose elements from known reference areas to represent and model new subject matter. Multiple Representations is an educational methodology that is used to convey the definitive aspects of an idea or topic, by modelling them through “abstract or natural representation systems”, (Gardner, 1999b). The form of the representation may be closely tied to the physical subject, such as a “photographic record, map, or chart”, or may provide a “formal model”. Multiple representations allow students to choose elements from “known reference areas” to represent and model the new topic. The use of multiple representations allows students to understand on a deeper level through developing models of the new subject matter, (Table 4).

Based on these general information it can be suggested that the main objective of contemporary education system is to provide acquisition of information by observing, applying and associating with the life, not by learning by heart; and to improve the skills of the learner for accessing to new information, for adaptation to new situations and to improve their creativity. In this system, to attain such an objective, it is underlined that the student should be an active participator rather than a passive receptor. Interior Architecture Education and the process of Interior Architecture Project-I course, which is one of the cornerstones of this education, should be parallel to the contemporary education system. Especially in the first year of design education, the objective is to support and improve the creativity, judgment ability, team spirit and communication skills, manual skills, graphic
thinking and three-dimensional thinking and designing activities with the offered theoretical information. Contemporary education system suggests the methods for motivating the students using various education methods in teaching and learning stages, (Table 5).

Table 4. Multiple Representations

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Table 5. Contemporary Education Methods, (Kuçukahmet, 2000)

Based on the given information, within the scope of Interior Architecture Project-1 course, as a central discipline, we tried to apply asking, addressing fundamental questions such as “meaning of life”, “meaning of design”,

167
analyze semiotic and numerical and artistic relationships, story telling by verbal, intrapersonal/interpersonal ways, constructing new experiments and experiences, within the context of individual differences by using question and answer, simulation, presentation, group discussions, teaching with a team, programmed teaching and role play/creative drama methods.

There was a Story...

Within the scope of Karadeniz Technical University the Department of Interior Architecture first semester Interior Architecture Project-I course; our objective was to organize each weekly program in a way to supplement each other when they are given in successive courses. This means that our objective was to organize each weekly program to serve as a circle constitutes a chain with the previous and next processes. As a result of this, a single product; interior design project came into being, but in this process we tried to allow the students to acquire some certain concepts which are the basis of the profession using participatory education techniques. The students in this process, in addition to being informed, are expected to improve their creative skills, as a result, to improve their skills of conveying their designs using sensory tools (verbal, visual and tactile ways). In this context, the students in Interior Architecture Project-I course were asked to choose a classical fairy tales in which place descriptions are made, and to analyze the theme, space and heroes of the fairy tales and to design a “playroom” for children. The process was not started by directly assigning a project subject. Instead of this, a study organization was organized which would prepare the students mentally for the project process. The studies carried out in the semester in line with the determined objective can be categorized as “Applications/Tasks” and “Plays/Dreams/Expressions/Presentations” individual and groups studies. In addition, the lecturers held seminars on basic concepts such as “design”, “creativity”, “abstraction”, “surface”, “space” and “sketches”, which should be learned systematically in interior design education.

Episode I: Greetings to a New World...
A good start means half of success”, A. Gide

In the first course at university, as the student is at the beginning of the process of getting familiar with a new city, school, profession, friends and lecturers, he/she attends the class with many questions (marks) and hesitations. In such an environment, the students needs to be motivated for expressing himself/herself, to communicate and to adapt to the environment. Bearing this in mind, in the first course, the lecturers first introduced themselves and then each student was asked to tell about their impressions
about their classmates sitting next to them in ten seconds. As a result of this, the students had their first dialogs with their friends and they overcame their timidity.

Later, the students were given two papers and they were asked to list their expectations about their new environments and their new professions in the first paper; and to list their hesitations and fears in the second paper. The students were not asked to write their names on the papers. Thus, the students were allowed to write all their ideas with confidence. After that, these papers were collected and grouped, and then were hanged on the wall. And finally, according to the information collected from the students, the lecturers made necessary explanations, and the students were allowed to participate by asking questions.

The purpose of this introduction ceremony was to make a good start to the newness and to motivate the students for the education process they will experience.

**Episode II: Everyone has a story, a tale...**

“Explain the fairy tale concept by drawing and writing it to your two-dimensional study area”.

The purpose of this study, which was applied individually without explaining anything about design education, was to make each student to think about what the fairy tale concept mean from them through the inner journey of each student, (Table 6).

“Read and tell a fairy tale which contains space descriptions.”

The purpose of this study was to make each student to read a fairy tale and to adopt the fairy tale with its theme, characters and spaces. In the process of telling the fairy tale, the students were expected to make use of verbal presentation techniques, (Table 7).

**Episode IV: “To tell briefly, is the sister of ability”, A. Chekhov**

“To see is the start of renewal”, H. Matisse

“Tell the theme (main message) of the fairy tale you chose by drawing it on your two-dimensional study area”

The purpose of this was to make the students to express the theme by re-thinking through the method of drawing, without having any information about the concepts of creativity or abstracting. In other words, the purpose was to test their graphic thinking abilities.

In the following stages of the application, a seminar was held on “creativity” and the students were introduced to design education. With the idea of eliminating students’ concept confusion about ability and creativity and based on the fact that creativity can be improved by supporting it with education, we aimed to improve the students.
Table 6. Drawings of the “Fairy Tale” Concept
Table 7. Classics of some Fairy Tales

**Episode V: “Thinking is the self-dialogue of the soul”, T. Bernard**

“Tell the theme (main message) of the fairy tale you chose on a 20x20x20 volume using inorganic materials such as card board, colorful cartons, strings, metal wires, sticks...”

At this stage, the purpose was to pass from two-dimensional thinking and expression style to the three-dimensional dramatization and designing techniques using different materials and techniques.

In the following stages of the application, a seminar was held by the lecturers on “design”. The concept of design, which is among the most basic concepts, is explained with design approaches and the objective is to make the methods of seeking solutions to the problems clear for the students, (Table 8).
Table 8. Three-dimensional Dramatizations of the Fairy Tales

**Episode VI: “Coming together is a start. Standing together is progress. Working together is success”, H. Ford**

“Make groups of four. Combine four different fairy tales and create a new fairy tale.”

In this study, the students were asked to analyze the fairy tales chosen in groups of four people and to make a synthesis and to create a new fairy tale composed of the names, organizations, themes, spaces and characters of the fairy tales.

This study has two objectives. The first objective is to make a group study and to improve the ability of team spirit, communication skills, social
interaction and attaining a goat collectively. The second objective is to compose different parts by using creativity and by the method of elimination and experience in a way to form the whole.

**Episode VII:** “The most powerful weapon on earth is the human soul on fire”, M. Foch

*Make a presentation of the new fairy tale created by the group and your own fairy tale*.

In this application which was carried out in group presentations, the students were asked to use all presentation techniques such as verbal presentation, drawing, graphic, collage expressions, model expressions. In this presentation, in addition to the pleasure and challenges of group study, the objective is to discuss all aspects of the new fairy tales created by the groups, whether they make a whole and whether they have missing parts and to provide the class to think on the subject.

In the following course, “abstraction” concept was explained by the lecturers. The production of easily-remembered, striking and creative products in the field of design is parallel to the ability of abstract thinking. With this seminar we tried to convey the importance of abstraction and abstracting methods in the solution of design problems to the students.

**Episode VIII:** “Walking hand in hand, one side of me is fairy tale; one side of me is real…”

*Discuss the characters that the new fairy tale implies with your group. Determine the properties of the characters such as physical appearance, hobbies (interests), phobias (fears), habit and other striking behavioural properties in detail and tell 1 day of the characters using visual tools such as photographs, posters and film.*

In this study the character will be in different spaces in a day and as a result of this, it is expected that certain space descriptions will be made using the properties of a character. The student is made to think and interpret the concept of “space” which is the principle element of interior architecture discipline.

In the following courses, we tried to give “surface” and “space” concepts to the students in seminars. The purposes of these seminars are to give general information to the students about the surface around us and the spaces that the surfaces define and to make the students notice various space formations and space types.

**Episode IX:** “Hearing means forgetting, seeing means forgetting, applying means understanding”, Chinese Proverb
“Make a space description using your body language.”
In this study, the students were asked to use some accessories and accessories in various types without using any verbal presentation and to give the impression of different space feelings in the minds of the audience. The purpose is to make students to make space connotations using their imaginations and creativity using some tools and thus to make them mentally interpret and adopt the concept of space and space types, (Table 9).

Table 9. Expressing the Space using Body Language
Episode X: “The biggest power a person holds is the power to choose”, M. Kone

“Choose the dominant space in your new fairy tale and make a 1/1, 1/2 or 1/5 three-dimensional explanation of this space.”

In this study he purpose is to make the students to reach to a new synthesis by composing the dominant space in the fairy tale with their information about the concept of space. In addition, the objective of this study is to improve the construction and structure creating skills of the students by selection of materials by co-decision, the utilization and composition of the materials, (Table 10).
Episode XI: “Music is the architecture of sounds.” Madem de Stael
“Architecture is frozen music.” J. W. Goethe

“Imagine the music of the fairy tale you created. Perform the presentation of your original music without using any known musical instruments.”

The sense of rhythmic exist with the music and addresses to the inner world humans. Rhythmic sounds may give certain feelings such as pessimism, joy, fear and love. Similarly, the sense of rhythm is reflected in architecture with the systematically organized styles, forms, emptiness and colours.

The purpose of this study is to improve organization, wholeness and sense of rhythm of the students by conveying the main theme of the fairy tales with the music they designed according to the theme, (Table 11).
Table 11. Instruments and the Performances of the Musics of the Fairy Tale Spaces

Episode XII: “When thinks alone, a person challenges everyone”, La Fontaine

“Make a visual impression sketch based on your near surrounding.”
At this stage, the lecturers gave a seminar on “sketches”. By emphasizing the importance of sketch in design studies which can be defined as a graphical thinking method, which provides rapid thinking in designing stage, the students were asked to observe their near surrounding and to make visual impression sketches which reflect this environment.
Final Episode: “I am where small feet take large steps…”

Within the scope of Interior Design Project-I course, the subject matter of Interior Design Project-I aims to re-interpret the concept of “fairy tale” within the context of an inner space design. In this context, the subject matter of Interior Design Project-I was determined to be “a playroom”. The playroom which is asked to be designed will be shaped according to the original scenarios and creative ideas of the designer by taking inner-outer space relations within the space given to the designer.”

This study takes almost four weeks and it includes two-dimensional and three-dimensional presentations of the design according to the obtained information and requirements.

The objective of this study is to re-consider all subjects previously given in a fairy tale organization simultaneously, and to finalize the fairy tale organization within the context of inner space designing, (Table 12).
Table 12. Models of the Playrooms
In the Name of Design...
In this method, the objective is to give the basic concepts that should be adopted within the Interior Architecture discipline. It was observed that the association of the studies applied from the beginning of the process with these concepts; successive application of them and explanation of the concepts with creative and enjoyable study subjects has been advantageous for the participation of the students to the course. It was observed that the completion of the process which continued successively with the final study motivated the students better. And in the students the students solved the problem they were assigned, and were aware of the objectives, benefits and results of their studies, (Table 13).

<table>
<thead>
<tr>
<th>Presentations</th>
<th>Studies</th>
<th>Main Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Explanation of the concept of fairy tale by drawing (<em>what is fairy tale?</em>)</td>
<td>• Thinking by drawing-drawing by thinking</td>
</tr>
<tr>
<td>P1</td>
<td>Reading fairy tale (<em>tell me a fairy tale</em>)</td>
<td>• Research, finding, adoption</td>
</tr>
<tr>
<td>P2</td>
<td>Two dimensional presentation of the fairy tale theme (<em>what does this fairy tale whisper</em>)</td>
<td>• Making connotations and graphic thinking-graphic expression</td>
</tr>
<tr>
<td>P2</td>
<td>Three dimensional presentation of fairy tale theme (<em>what does this fairy tale whisper</em>)</td>
<td>• Improving creativity</td>
</tr>
<tr>
<td>P2</td>
<td>Creating a single fairy tale as a group (<em>meeting in the world of fairy tales</em>)</td>
<td>• Improvement of team spirit-communication</td>
</tr>
<tr>
<td>P2</td>
<td>The presentation of the new fairy tale (<em>this is our fairy tale</em>)</td>
<td>• Finding creative thinking</td>
</tr>
<tr>
<td>P2</td>
<td>The introduction of new fairy tale characters</td>
<td>• Realizing the details</td>
</tr>
<tr>
<td>P3</td>
<td>A day in the lives of new fairy tale heroes</td>
<td>• Thinking the space concept</td>
</tr>
<tr>
<td>P3</td>
<td>Space explanation using body language (<em>the space in my mind</em>)</td>
<td>• Adoption of the concept of space</td>
</tr>
<tr>
<td>P3</td>
<td>Three dimensional (1/1, 1/2, 1/5 scale) explanation of the dominant space of the new fairy tale</td>
<td>• Construction and structure building skill</td>
</tr>
<tr>
<td>P4</td>
<td>Musical presentation of the fairy tale theme (<em>how does this fairy tale sing</em>)</td>
<td>• Improvement of architectural sense of rhythm</td>
</tr>
<tr>
<td>P4</td>
<td>Explanation of the dominant space of the new fairy tale with visual impression sketches</td>
<td>• Expressing the ideas and observations by drawing</td>
</tr>
</tbody>
</table>
Table 13. Process of Interior Architecture Project-I Course

The design of children playroom  •  Improving study discipline in a way to support the subjects

The studies continued with individual and groups studies and as a result of this the students were made to understand the importance of individual and group study and to make assessments about the reactions of the students about communication and the concept in group studies.

Depending on the idea of “one of the most important ways to obtain the motivation is awarding”, (Ozbay, 2001), competitions were organized during the semester. In these competitions, each group was asked to present their studies to the class and then a student was asked to assess the “works” and to vote. This gave the opportunity of evaluating and criticizing the studies of other students and thus they had the opportunity of benefiting also from other studies. In addition, competition environment motivated the students better and made their study more entertaining, (Table 14).

Table 14. Voting and Awarding Ceremony

As a result of all these studies, it was observed that in addition to understanding the given concepts, communication, self-expression, self-
confidence, creative-abstract and graphic thinking skills of the students improved.

This method which is applied in the first semester will continue in the second semester with different concepts and application subject such as “design techniques”, “conceptual design”, “emblems/logos”, “colour” and “presentation techniques”.

In this method which was applied in the first semester of Karadeniz Technical University, Department of Interior Architecture, all of the studies were carried out within “fairy tale” organization it is thought that this organization may change in different years and considering main concepts, different studies with different organizations can be carried out.

References


CREATIVE DRAMA; AN ALTERNATIVE IN ARCHITECTURAL EDUCATION

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183
ABSTRACT

The aim of this study is to seek ways to implement creative drama techniques in architectural education. Such an aim will be reached in the light of the experience acquired through the experiences in the creative drama training programmes.

Burgeoning body of literature has revealed the crucial role attached to visual aids, active involvement of students and receptivity to courses being taught. However, traditional approaches have failed to achieve these desired objectives. Thus, increasing productivity, capturing attention and permanence of learning have been the major tenets of educationalists and educational institutions.

Creative drama techniques used in various fields of education can be implemented in the departments of architecture and design-based programmes of other departments. For all the departments in question, educational drama techniques could be of great help to foster students’ imagination, improve productivity and aesthetic awareness, make abstract concepts concrete, help individuals provide insights into new ideas and new perspectives, nurture empathy and empower imagination, stimulate curiosity and the need for exploration, assure confidence enable personal development, develop problem solving abilities, create effective speech, ensure the permanence of learning. The techniques in question are considerably significant to help students comprehend the courses, ensure participation and trigger critical thinking in the courses offered in architectural education such as design, architectural history, and arts history and so on.

Drama as a discipline could be classified into two parts: drama in arts education and drama as a teaching method. The role of drama in arts education is highly significant as it aims at improving students' personal skills, aesthetic appreciation and enhances visual abilities and creates new perspectives. This aspect of drama could be adapted to education of architecture and design. Drama as a teaching method, on the other hand, might yield fruitful in terms of long-lasting learning, individuals’ establishing relationship with the outside world, catching up with the scientific and technological advancements and a growing awareness in social and cultural developments as well as arousing curiosity for the current issues.

Drama consists of four types, namely psychodrama, creative drama, educational drama, and sociodrama. This study will elaborate on educational drama or “drama in education” and its techniques since this field is much related to design education. Education in drama makes use of applied
learning techniques rather than techniques based on memorization. Thus, the aim here is to provide permanent learning, establishing relationship with the previous and future subjects and personal experiences. In this manner, drama in education offers a variety in terms of method as well as new perspectives.

Creative drama involves three phases: Warm-Up (Preparation), Animation, Evaluation (Discussion, Negotiation). A variety of techniques such as unfinished materials, still images, improvisation, moment of truth, letters, rituals, ceremonies, role cards, hot sitting, interview, pantomime, holding a meeting are used in these phases.

Choosing the appropriate techniques for the course, the trainer may develop his/her own plan as s/he wishes. Using the drama techniques, various applications in a variety of disciplines have been carried out in accordance with the educational programme attended. The studies conducted have revealed that techniques applied through creative drama could yield fruitful in architectural and design education. To this end, various method samples have been offered as an alternative approach to educational programmes in the departments of design and architecture. As a result, the study demonstrates that the topic that is to be taught could be covered making use of the drama techniques and visual materials.

Key Words: Drama, Creativity, Creative Drama, Drama in Education, Architectural Education
CREATIVE DRAMA; AN ALTERNATIVE IN ARCHITECTURAL EDUCATION

“Good design is about looking at everyday things with new eyes and working out how they can be made better.”
James Dyson, 1999 (10)

One of the main goals of education is to foster creativity. It is the process of creativity that lies beneath all affective, cognitive and metacognitive activities and it is also creativity that occurs in all of the studies, (Kamaraj and Aktan, 1998). Creativity could be regarded both as a process and production. John Preeman describes it as “being able to offer multiple perspectives and a variety of ideas.” (Noyanalpan, 1993). Creative thinking is an independent, productive and dynamic process. It requires looking at a point from different angles and providing multiple solutions. The processes of Rationality, Flexibility, Originality, Enrichment, which are the four aspects of creative thinking, are highly important for mental development of the individuals. Read (9) defines creativity in arts as “bringing a form or something that has no face in life” (San, 1985). Creativity in arts refers to reaching wholeness which involves aesthetic values. The end product is a work of art. Thus, creativity is of crucial value in design-based training programs such as architecture. To this end, one of the most effective ways to boost students’ performance and creativity is drama. Drama fosters the motivation, receptivity (receptivity to both the work and course), intelligence (thinking-problem solving), communication and willingness to get engaged in the work to be done. It is creativity which leads to a good design. Thus, ensuring creative thinking leads to a good design. Therefore, boosting creativity should become the sine quo none of design training. Creating individuals who can approach a subject from various perspectives and who seek betterment is fairly significant as such an improvement would lead to originality and original products. Discrete identities and distinctive voices will pave the way for original designs.
1. DRAMA
The word “drama” comes from a Greek word “dran” which means “to act, to do, to make” Norman defines it as the following: “Drama means to provide an atmosphere where connotations, feelings, knowledge and experiences are emancipated.” Drama activities refer to giving a meaning to universal, social, moral and abstract concepts (1).

1.1. TYPES OF DRAMA
Drama can be grouped into four categories written below:
- Creative Drama
- Drama in Education
- Psychodrama
- Socio-drama

1.1.1. CREATIVE DRAMA
Creative drama is to represent or animate a subject, an experience, an event, a concept or behavior with a group utilizing improvisation and role play techniques and using the experiences of group members (1).

1.1.1.1. ASPECTS OF CREATIVE DRAMA
“Irrespective of the field it is used, creative drama could be referred as a learning method, a means of self-expression, or a means of art. Learning through drama promotes interaction, improves self-confidence and ensures socialization. Moreover, being member of a group, communication,
improvement in problem-solving skills are some other aspects to be mentioned hereby” (2).

“Drama as a discipline could be divided into two categories:

- Drama in art education,
- Drama as a teaching method.

When drama in art education is considered, a number of activities which aims at personal development are to be highlighted. In this respect, creative motion, improvisation and creative speech are to be stressed. The participants take part in games they have devised. Moreover, being both the active participant and spectator enables them to develop various perspectives.

This approach aims at improving:
- imagination,
- creativity,
- problem-solving skills,
- social differentiation,
- language and communication skills (3).

Drama as a teaching method could be used to teach various subjects in various fields of education (Social studies, Turkish, Maths etc.). This approach differs from the others in terms of objectives. In order to meet the goals and objectives defined in the curriculum, the approach could be used as a tool in learning-teaching. Referring and interpreting various articles and workshops will be of great aid on the way to see and explore different approaches and support theoretical knowledge. Studies should be supported by group projects and research assignments”(3).

1.1.2. DRAMA IN EDUCATION

“Drama in education refers to animation of a subject with a group utilizing improvisation and role play techniques and using the experiences of group members. Drama activities take place by making use of general characteristics of games in the improvisation process. These activities are carried out in a workshop setting defined beforehand with a group of participants accompanied by a leader. The objectives of the activity to be conducted and the characteristics of the participant group shape the nature of the process in question”(4).

“It serves as a teaching method and an alternative way to education systems in which memorization, cramming knowledge and narrow-mindedness are
credited while establishing associations and synthesizing correctly are
doomed to failure” (5).

“In educational process, personality, attention, intelligence, and experiences
are in close interaction with each another. As a result of such an interaction,
objectives, knowledge, attitudes, moral criteria and social values are subject
to change. Education as a process refers to an analysis of social conditions,
and application and determination of principals, skills and concepts which
could be integrated into teaching-learning system” (6).

1.1.2.1. ADVANTAGES OF DRAMA IN EDUCATION

• Promotes long-lasting learning
• Nurtures empathy
• Empowers imagination,
• Offers new dimensions,
• Triggers curiosity and investigation,
• Improves problem-solving and analysis-synthesis skills,
• Concretizes the abstract,
• Provokes creativity,
• Assures self-confidence and personal development,
• Enhances students’ repertoire,
• Helps students develop effective addressing strategies and improve their rhetoric.

1.1.2.2. STEPS OF DRAMA IN EDUCATION

Drama in education consists of three phases:

  Warm-up activities,
  Improvisations,
  Evaluation (7)

Warm-up Activities: These are the activities in which the participants, in the
guidance of a group leader, master activation of five senses, promotion of
observation, interpretation of body language and sharpening tactile acuity,
meeting someone/something new, establishing communication, building
trust and adapting to new social conditions.

Games: Games refer to free activities and the development of such activities
which are governed by certain rules. Sometimes child games are played. Creativity and imagination are involved in these games.

Improvisation: Being a less certain process, improvisation sometimes
requires abandoning a defined subject or topic or moves to a targeted point
in graded steps. These are the activities in which individual and group creativities have the leading role.

Formation: This process begins with an unknown starting point such as communicating with an ordinary object, a photograph, a drawing, a statue and so on. How the process will develop or what the destination will be is not certain in advance.

Evaluation: Evaluation refers to creating a discussion after each phase or some phases and receiving feedback. Getting answers from the participants to questions such as “What have you experienced?” “How did you feel?” “What sort of difficulties have you had?” is a highly important step in drama. Arousing awareness of others’ behaviors, feelings, ideas, and experiences enables one to question his or her life critically (8).

1.1.2.3. TECHNIQUES USED IN EDUCATIONAL DRAMA
The following are the techniques used in educational drama:

- (Lecturing)
- (Space Between)
- (Conscience Alley)
- (Split Screen)
- (Material Use)
- (Music)
- (Visual aids)
- (Gossip Circle)
- (Still Image)
- (Improvisation)
- (Thought Tracking)
- (Forum Theater)
- (Photo moment-Still picture)
- (Moment of Truth)
- (Flash Back)
- (Inner Voice)
- (Small Group Improvisation)
- (Letters)
- (Teacher In Role)
- (Ritual-Ceremony)
- (Writing In Role)
- (Role Cards)
- (Role Play)
- (Hot Seating)
- (Reportage)
2. ARCHITECTURAL EDUCATION AND DRAMA TECHNIQUES

Drama in education offers a diversity of perspectives and a different method for teaching. Creative drama aims at creating individuals who question life, think critically, and establish a solid reasoning between events, master problem-solving strategies (Kirişoğlu, 1991).

In architectural training, creative drama techniques could be utilized for empowering students’ imagination, boosting productivity, encourage aesthetic appreciation, concretizing the abstract thoughts, providing insights into new perspectives, helping them build self-esteem and trust, aiding them improve effective speech and ensuring long-lasting learning. Since students will be able to establish relationship between the courses and real-life experiences and actively involve in the courses, their motivation will be relatively high thanks to the techniques employed in classes. They nurture their empathy, improve problem-solving skills and enhance viewpoints.

| 1. sensitive | 18. ingenious |
| 2. motivated  | 19. energetic |
| 3. adaptable  | 20. sense of humor |
| 4. observant  | 21. self-actualizing |
| 5. perceive world differently | 22. self-discipline |
| 6. see possibilities | 23. self-knowledgeable |
| 7. question asker | 24. specific interests |
| 8. can synthesize correctly | 25. divergent thinker |
| 9. often intuitively | 26. curious |
| 10. able to fantasize | 27. open-ended (don’t fix on a single |
| 11. flexible idea, keep looking for many different | 12. fluent ideas or ways to do thing) |
| 13. imaginative | 28. independent |
| 14. intuitive | 29. severely critical |
| 15. original | 30. non-conforming |
| 16. confident | 31. persistent |
| 17. risk taker |

Figure 2. Traits of Creative People (Black, 1990)

Everybody has the potential to be creative. Drama enables self-recognition and discovery of the creative potential one is equipped with. Thus, integrating drama into the design-based departments, particularly
architecture, would yield pretty fruitful to foster creativity (4). Cultivating creative spirit, drama education boosts one’s yearning for creativity. The traits of creative people demonstrated in Figure 2 are the much desired goals of drama in education. As indicated in Figure 2 drama in education triggers people to become adaptable, observant, imaginative, original, ingenious, curious, confident, question asker, divergent thinker, or become the ones who can synthesize correctly, perceive differently and have a sense humor.

Different ways of expression based on creativity could be turned into a variety of art products. Therefore, in the departments offering design and art based training, drama techniques and educational drama are of significant value. The aim of the study is to improve the creativity of students studying architecture, develop their aesthetic appreciation, encourage cooperation, promote their decision-making skills, thereby obtaining original pieces of art.

2.1. SAMPLE ACTIVITIES ABOUT THE USE OF DRAMA TECHNIQUES IN ARCHITECTURAL EDUCATION
The sample activities presented hereby can be diversified into various forms and techniques. Moreover, duration of class hours was not taken into account in the examples. Considering the curriculum of the institution where the study will be carried out, the activities could be employed in separate lessons in a graded fashion. Creative drama could be used both as a technique in education and as a separate course through which creativity is fostered.

2.1.1. SAMPLE ACTIVITIES TO BE INTEGRATED INTO THE PRESENT CURRICULUM
The sample activities presented below have been developed in order to enable students to turn their thoughts about a topic or a concept studied in “Basic Design” classes into creative designs by making use of drama techniques.

SAMPLE ACTIVITY 1
Subject: Rhythm
Techniques Used: Material Use, (Visual Aids and Music), Rituals-Ceremonies

Material Use: It refers to participants’ use of visual and auditory materials.
Rituals and Ceremonies: For certain anniversaries, special days and celebrations, students arrange rituals and ceremonies in accordance with their belief system (O'Neill and Lambert, 1984; Neelands, 1990; Somers, 1994) (4).

Step 1: The teacher hangs some pictures about rhythm on the wall and asks students to look at the pictures as if they were in an art gallery. Some music accompanies them while they are looking at the pictures. Then, s/he asks them to write down what they feel in one word.

Step 2: Students are asked to prepare a ritual by establishing silent rhythms of feelings they have.

Step 3: After performing the ritual, students are asked to develop a design about the concept of “Rhythm”.

SAMPLE ACTIVITY 2
Subject: Permeability
Techniques Used: Material Use, (Visual Aids and Music), Games, Silent Improvisation

Game: These are the activities developed sometimes according to some rules and sometimes according to creativity. Six principals of the games are: Freedom, Inner Eternity, Acting As If, Duality, Closed Integrity, and Here and Now.

Silent Improvisation: This technique enables the participants to become a better observer by focusing on an activity as well as familiarizing with the body and body language. Silent improvisation stands for the expression of ideas and feelings without words (4).

Step 1: Depending on the teacher’s choice, the lesson might start with a comprehension task or game which is about the subject. For instance, “Find your house”. Students are split into groups of three. Then, two students are asked to form a circle meeting their hands. The third person is in the middle of the two. The aim of the third person who is in the middle is to find his/her home when there is an exchange of houses. However, the teacher gives some instructions when there is an exchange such as from the outside from inside. When s/he says “from the inside” the hands overlooking the inner part are detached, so the person in the middle is supposed to find a new shelter. When “from the outside” instruction is heard, the couples wait for a new guest. If a person is out of shelter, he becomes IT. Closed hands are
obstacles in the game and they represent impermeability while the open hands refer the opposite.

Step 2: Students are asked to write a short poem regarding permeability and then animate it without using words.

Step 3: Students are asked to develop a concrete design out of the poem they have written.

The activities below are developed to ensure a long-lasting learning in some subjects of History of Architecture and Arts History courses through drama techniques.

**SAMPLE ACTIVITY 3**

Subject: Modernism
Techniques Used: Material Use, (Visual Aids), Writing in Role, Still Image.

Writing in Role: Participants are asked to write a letter, report, story, postcard and so on about the relevant topic.

Still Image-Table: Groups are asked to make a still image. It might be the steps of an event (e.g. beginning-final part). Since it will be a still image, everybody in the group is asked to stand still. Sometimes a moment of truth might become a sculpture or the other participants might be asked to become a chain for the image (4).

Step 1: The teacher asks the students to split into groups 3-4. S/he distributes different examples from the followers of the Modernist Movement to each group and then the students are asked to write a paragraph about the examples distributed. Then, they are asked to choose 3 concepts about the examples.

Step 2: Everybody reads their paragraph aloud. Then, the teacher asks students to choose an example paragraph read in the classroom and the 3 concepts chosen, and act them as a still image.

Step 3: Students are asked to design a threading of the paragraph, concepts and still image they have heard or seen.

Step 4: It is lecture time, and the movement is studied illustrating with the examples given to each group.
SAMPLE ACTIVITY 4
Subject: Hellenistic Art
Techniques Used: material use (visual icons in the works), role cards, role-play

Role cards: Role cards provide information about the conditions of the role players and clues for improvisation.

Role play: It makes it easier to act by speaking out the things they can’t in real life and it is the basis of all elements of theatre and drama. Developing language and motion, role play also increases sensitivity towards different viewpoints. One should avoid getting out of his/her role unless there's an exception and also avoid exaggeration and repetition (4).

Step 1: The instructor teaches the students

Step 2: They are divided into groups and distributed samples belonging to Hellenistic Era. The students are then asked to make role cards after observing the samples and by taking into account the number of people needed. The content of the samples should include depiction of the specific era, clothes, setting, and characteristics.

Step 3: The cards formed by the students are once more distributed randomly regardless of their groups and asked to make up a story out of the depictions in the cards and act out.

2.1.2 SAMPLE ACTIVITIES FOR CREATIVE DRAMA AS A LESSON
Inspite of being an alternative method, drama is a lesson in itself which is fundamental for students in terms of the development of creativity. In this respect, the two practices which were formed by benefiting from "Contemporary Drama Group Leadership 1. and 2. Step Program" are invaluable examples of why drama can be a primary course in architecture, design and artistic education. The sample study below is based on Nejat Akfirat and H.Omer Adiguzel’s works attended by a group of 27 participants on 29.01.2008 at Trabzon KTU Fatih Faculty of Education Drama Hall.

SAMPLE ACTIVITY 5
In the drama tasks that have been carried out, information about the individual's observation talent, characteristic features and even psychological situation can be obtained. In the study below, the participants have been asked to note down what they see out of the window and the
results have either been drawn, written or systematically classified into groups. It is seen that some individuals' attention were drawn on the details while others only mentioned the general outline. Furthermore, there has been a difference in the focus point of the participants: some of them focused on the objects close to them whereas others to the objects farther, therefore missing the details. It can be said that as a result of this study, the individual features, points of view, talents and emotions of the participants are important concerns revealing them. In parallel, it has been seen that personal values, interests, backgrounds, education and perception are also equally valuable.

Figures 3. Individual's observations

A study related to observation and personality features. The sample studies below are based on Seda Pakkan's two works "Dance-Motion and Mask" and "Museum" which were attended by 20 participants on 9.3.2008 at Trabzon KTU Fatih Faculty of Education and St. Sophie Museum Trabzon.

SAMPLE ACTIVITY 6 – Dance, Motion and Mask Study

Step 1: In the mask study, the instructor leads a rhythm exercise as gestures are more important than mimics so as to use body language. Compositions of dance, walking and motion are formed along with music in different directions with 8 steps. The instructor asks the individuals to prepare a choreography that involves different emotional situations.

Step 2: The students are divided into two groups of A's and B's. A's are hunters and B's are hunts. The movements begin along with music while A's look for B's in a field. The instructor asks the feeling of "terror" in this context.
The partners are dangerous for each other and without making any physical contact, they are asked to communicate the feeling. In addition, they are supposed to stop at certain times through music and look at each other to give the feeling.

Step 3: The room is decorated with pictures from different cultures and tribes. The group observes these masks and thinks about why and how they are put on the wall. The aim is to observe, act and sound according to the pictures.

Step 4: The next step involves the teacher's speech about the session subject on Masks and Rituals, their history, culture and use.

Step 5: The individuals are divided into groups, each group with a certain concept. They are asked to act out without words accordingly. The use of mask in the improvisation is also needed. For this, masks are prepared with paper, paint and different materials to be used in the acting along with music.

Figures 4. Sample Masks from the Mask Work

SAMPLE ACTIVITY 7 -The Museum

Step 1: A museum is selected by the instructor and he/she pictures the icons and designs these pictures to be printed as colored puzzle pieces.

Step 2: The puzzles are distributed to the individuals in groups and they are asked to put the pieces of the puzzle together. Later on, they search for the icons in the pictures as they walk and explore the place-the museum. Historical and mythological information related to the pictures are later read.
Step 3: The instructor asks the individuals to prepare a quartet by using the pieces of the puzzle and exhibit them in the museum with using still image.

Step 4: The instructor gives information about the history and structure of the museum.

**SUGGESTION AND CONCLUSION**

As a technique, drama serves as a catalyst in catching the students' attention and interest to the lesson and is also a crucial factor in enhancing their creativity, their artistic and aesthetical point of view. In fact, creativity is both a method that could be used in class and a lesson that must be taught as one of the primary subjects in architecture, urban design and industrial design. Drama, as a whole, seeks for answers to questions such as who, what, where, how and develops the skills of thinking, design and practice in obstacle-aim-solution theory. It also helps increase pupils' self-confidence and the ability to adapt to new environments. For this reason, drama is presented as a methodology and a lesson suggestion introducing us an alternative.

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INVESTIGATION OF CULTURAL AFFECTS ON DESIGN EDUCATION

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Design activities encompasses cerebral activities including thinking, imaging and decision-making as well as practical and externally perceptible activities such as information gathering, drawing and model-making. In getting and developing of these skills are effective inheritance and environment in addition to education. Effects of this are possible to observe every field of art and architectural design today.

It has been believed that inheritance is effective on physical and intellectual characteristics by researcher. Skills of thinking and problem solving have been transferred to people as hereditary. As for the environment, it improves or limits the characteristic that has been gotten from inheritance. Factor of environment can be considered as before, during and after of birth in growth. In this context, it is clear that the environment is effective from insemination of zygote to being born and death of person. Especially after birth, family environment of that person live in, communication quality between the people, socio-cultural status of family, friend groups, institutions in school and community, people, social values and norms are the environmental factors that improve or limits the growth of people.

In content of this study have been selected students who are in the freshman class at the Department of Architecture at KTU. Personal information (gender, age, etc.) cities that they were born, education (at elementary school, high school or private school), family structure of these students and excursions that they has been participated in has been determined by public survey. Data which had been gathered has been established relations with grade which the students got from basic design course that has been taught in the first term of Department of Architecture. Also it has been researched whether there are any connections between grade and socio-cultural factors which have been explain above. In this study data that has been obtained from survey and grades has been presented as table and graphics.

Keywords: Design Activities, Culture, Education, Environment, Architecture
INVESTIGATION OF CULTURAL EFFECTS ON DESIGN EDUCATION

1. Introduction

Basic Design is a discipline which has purposed that students have increased level of being ready, helped them to recognize characteristic of personality, controlled their judgment and been rescued from prejudice. This discipline has given the students opportunity to realize personal differences via their life. Also it has steered the students towards knowing own potential of cognitive and sensitive by getting out of their vision and considering habits in artistic creativity and problem solving. Therefore, the conscious will has developed both general and local sense (Seylan, 2005). In addition to design education has aimed to expend on boundaries by providing creative considering.

When the basic design has investigated as words; concept of basic—as for illustrate with building—hasn’t been visible after constructing building and unusually can’t be direct connection with upper appearance and order. However, it must be to construct the building. The concept of design has been defined as thinking or forming in mind, formulating for a goal, finding methods, planning systematically, being a goal, target and intention, creating, finding and inventing on a subject that require high or artistic skills (Seylan, 2005). Also design is the name of becoming objective like result product, sketch, perception forms that has occurred from these process. Consequently, the basic design course is the one of main and probably the most important components that has constituted architectural education. Being a strong of this education, ground that the foundation will settle must be strong, too, besides basis. The question—how should be a strong ground/background?—can be asked. The strong background can be constituted via talents, repetitions, discipline and convincing. Actually being learning of these actions hasn’t direct connection with design. These have constituted background of design and a lot of talents. Also, there are a lot of factors that affect the design and design process like an innovation, invention and contribution of designer on idea, view, interpreting, education, custom-traditions of her/him, fashion, folklore, technology, subject which studied on, conditions of environment, economic situation, functionality, trends of art etc. (Güngör, 2005). It is impossible to educate perfectly the students who begin at department of architecture without constituting the background that contain a lot of components (Denel, 1998). Briefly it can be said that the background of student who want to be an architect should be reinforced and then the basic of education should get established in this strong ground.

In this study has investigated factors that has been mostly effected the developing of person like structure of family, social-cultural environment and education of him/her.
Structure of family;

Family is important factor for cognitive and physical developing of her/him. The origin of most abilities besides intelligent which never could be acquired later is the family. For this reason, the structure of family, attitude of parents against children, communications between the family people has greatly influence on children’s psycho-social, mental, sexual and physical development.

Observed attitudes and behaviors of parent have influence on activities of children, roles of sexuality, briefly, the whole personality development. It has been observed that the children of parents who have put stiff rules for children’s behaviors, obstructed to explain wishes and inclinations of them and punished them has grown as faraway from creativity. It has appeared that excessive tolerant parent’ attitudes have injured the children in term of emotional, too. Also the children of parents who have acted restrictive, but friendly have become shamefaced, dependent and less creative. Consistent and trustworthy parents have steered children toward their ability and they have established democratic relations with children. It has been observed the children who have growth up such families become respectful to oneself and successful (Figure 1)

Factors such as socio-economic and cultural structure of families, broken families, nourishment habits, sequence of children’s birth is important for growth. For example, it has been said people who has been grown in an artist family become more sensitive than others. While the sense, opinion and imagination have been transformed into product because, art education has built up creative action on people. The first children usually has become successful, an intellectual, regular and ambitious, but their self-confidence has been few. They also can be more deliberate and conservative. It has been observed the last children have become more lately mature than the first one. As for the second child (in a family which has three children), if there is no characteristics such sexual discrimination, can grow under pressure and they can see own less talented. However, it has been observed they have raised more dependent, establishing well relation and being happy easily (Senemoglu, 2005).

These factors have been taken into consideration while the questions which are in section of family structure of public survey had getting ready.

Education;

The education is important as much as family to improve the design abilities. It is hard to say person whose intelligence, opinions and action hadn’t been educated become a good designer. Therefore, the education, especially before university, and its quality is important because it has constituted a ground for architecture and design education. The subject that has been
discussed here is how the students should be educated or has been educated, before coming to university. The students who have come to university with Student Selection Examination (ÖSS) that the question has been prepared as test techniques haven’t learned solid geometry course that is important for architecture and design and painting course has been taught as selective course (Dural, 1998). The students who come to university with this background have become confused and panic when they have met a lot of tools not becoming familiar of them. This situation has been affected accomplishment of the students. In contemporary community, educational model that has improved the creativity and intelligence beginning from kindergarten has been applied. As for in our country (Turkey), information has given the students as ready, the information which find in books has been accepted without thinking by them, they has been educated with a model that completely base on memorization. Therefore, the students have growth without knowing nature, art, science and technology. This has caused atrophy of curiosity sense which is necessary for teaching and designing. This deficiency of the students who have come from such educational system should be determined and architecture and design education should be put in a strong ground. To improve the abilities and cognition design education should be taught beginning from kindergarten and elementary school. Otherwise, the education which has been taken from only university would be inadequate especially for architectural education.

**Socio-cultural environment**

Personality describes the characteristics which make the people unique. Seeds of the personality are potential energy that comes from with heredity. As for area that potential energy has begun to develop is environment in which human has lived there. Human has worked to saturate motives that are necessary for living with obtained abilities in environment (Başaran, 1997). However, the human motives which have/haven’t been learned can be changed via education. Human has interacted with environment during life-span. Especially, social and cultural environment which people has lived can have kept them under thumb by hindering behavior as one pleases and so it has been effected the growth and abilities of them.
2. The Method
In this paper, data has been obtained by comparing. The comparison has been made between the result of survey which has been performed to determine family structure, education and socio-cultural environment of the students and the final grade which had been taken from the Basic Design Course. Therefore, it has been determined whether the background of the students has been effective on design abilities, if there is, how much the ratio is.

The public survey has been performed 30 students who are in the freshman class at the Department of Architecture at KTU. The students have been selected randomly.

In this survey, a part of data was obtained from open-ended, binary (yes, no), 5-point (very often, time to time, rarely, never) and 7-point (very, quite, some, recessive, some, quite, very) between the adjective pairs (authoritarian-tolerant, restrictive-free, prim-pliant, relevant-irrelevant, coherent-incoherent, trustworthy-distrustful) Likert scale questions whose number were twenty-nine. On the other hand, grades of the students have been used as data.

The survey consisted of four parts. In the first part, there were identity information (name and surname or the final grade taking the Basic Design Course, gender, the place of birth, province being enrollment). The second part was about the students’ education. The third part was about the family structure of the students. In the fourth part, there were questions that were helped to determine students’ socio-cultural level.

Data, obtained from questionnaire and the students’ grade, was evaluated with help of Microsoft Excel software.

3. Evaluation
In the paper has been investigated whether the students’ education which had been before undergraduate, family structure, socio-cultural environment has been affected on their success that had obtained from the Basic Design
Course or not. For this reason, these factors have been researched over the students’ success which had been obtained from the course that has been taught at freshman class, at Department of Architecture, KTU, in 2007-2008. 69 students had been enrolled the course and 67 students had been participated in the final exam. The public survey had been applied on 30 students. %66.67 of them were woman, the other was man. Firstly, when has been seen the effect of gender on the success in the course, the women had been more successes than men. %13.33 of the students who had been taken BA grade was woman, %3.33 was man. %23.34 of the students who had taken BB was woman, %3.33 was man (Table 1).

Table 1. Success distribution as to gender

<table>
<thead>
<tr>
<th>Grade</th>
<th>AA</th>
<th>BA</th>
<th>BB</th>
<th>CB</th>
<th>CC</th>
<th>FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>0%</td>
<td>3.33%</td>
<td>3.33%</td>
<td>3.33%</td>
<td>3.33%</td>
<td>0%</td>
</tr>
<tr>
<td>Man</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

The west region of Turkey has more developed and possibilities than the east one. Therefore, place of birth and province being enrollment have been seen as effective factors on accomplishment. The Black Sea Region of Turkey was the first when had been seen the effects of regions in which students born on success. Marmara had followed the Black Sea. %6.67 of the students who had taken BA was in the Black Sea Region, %3.34 in Marmara. %10 of the students who had taken BB was in the Black Sea Region, %6.67 in Marmara (Table 2).

Table 2. The effect of the region on success.

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marmara Region</td>
<td>0%</td>
</tr>
<tr>
<td>Karadeniz Region</td>
<td>6.67%</td>
</tr>
<tr>
<td>Akdeniz Region</td>
<td>3.34%</td>
</tr>
<tr>
<td>Ege Region</td>
<td>3.34%</td>
</tr>
<tr>
<td>Güneydoğu Anadolu Region</td>
<td>6.67%</td>
</tr>
<tr>
<td>Ç Anadolu Region</td>
<td>3.34%</td>
</tr>
<tr>
<td>Doğu Anadolu Region</td>
<td>0%</td>
</tr>
</tbody>
</table>

206
When has been comparison between province being enrollment and accomplishment, it has been seen at first the Black Sea Region and than İç Anadolu region. The question-where are you come from- was answered by 29 students. % 10,34 of the students who had taken BA was in the Black Sea Region. The region can have been preferred by success student of that place.

It has been known the education which had been taken before undergraduate is an effective factor on success. For this reason, it had been investigated whether the students went to kindergarten, which high school they went and the courses which took the high school.

The students who went to kindergarten have become more successful. % 10 of the students who had taken BA, %23,33 of BB went to kindergarten (Table 3).

**Table 3. The comparison between going kindergarten and success.**

<table>
<thead>
<tr>
<th>percentile</th>
<th>AA</th>
<th>BA</th>
<th>BB</th>
<th>CB</th>
<th>CC</th>
<th>FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0%</td>
<td>10%</td>
<td>6,68%</td>
<td>3,33%</td>
<td>3,33%</td>
<td>0%</td>
</tr>
<tr>
<td>5%</td>
<td>0%</td>
<td>6,68%</td>
<td>3,33%</td>
<td>3,33%</td>
<td>3,33%</td>
<td>0%</td>
</tr>
<tr>
<td>10%</td>
<td>0%</td>
<td>10%</td>
<td>23,33%</td>
<td>23,33%</td>
<td>26,67%</td>
<td>0%</td>
</tr>
<tr>
<td>15%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>20%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>25%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>30%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

It had been asked for the student which courses that develop the ability such painting, home economy etc. had been taken before undergraduate education. The most of 22 students who answered the question had taken these courses. But these haven’t been effective on the success.

26 students had answered the question-what activities (social, cultural, administrative, etc.) had you participated in high school? It has been seen the students who had participated in folklore activities has been more successful (Table 4).
Table 4. The effect of activities that were out of courses on success.

<table>
<thead>
<tr>
<th>Activity</th>
<th>AA</th>
<th>BA</th>
<th>BB</th>
<th>CB</th>
<th>CC</th>
<th>FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folklore</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Chairmanship of club</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Sport activities</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Work a journal or newspaper of school</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Be playing show (put on by schoolchildren), sketch, etc.</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Music</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Painting</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

26 students had answered the question-what branches of art (painting, music, sculpture, literature, etc.) have you been interested or performed? % 19.23 of the students who had taken BA have been interested in painting, % 11.54 in photography. % 19.23 of the students who had taken BB have been interested in music and % 7.70 in literature. It has been seen that such interest fields has been effective on success (Table 5).

Table 5. The influence of the students’ interest fields on success.

<table>
<thead>
<tr>
<th>Activity</th>
<th>AA</th>
<th>BA</th>
<th>BB</th>
<th>CB</th>
<th>CC</th>
<th>FF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Picture</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Music</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Sculpture</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Photography</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Literature</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Drama</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Dance</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Cinema</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

It has been observed that the sequence of children’s birth hasn’t been effective on success of the Basic Design Course. The type of family hasn’t been investigated because the whole students had been growth in nucleus family that contains parents and children except for one. Also education of the parent hasn’t been an effective on success. In the survey has been investigated with whom and where the students have lived. The students who have lived at home with their family, private and public dormitory had been more successful than others. It hasn’t been observed that factors related to attitude of family have been effective on success (Table 6).
Table 6. The effects of family's attitudes on success.

<table>
<thead>
<tr>
<th>Attitude Type</th>
<th>Rating</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoritarian &lt; Tolerant</td>
<td>•</td>
<td>AA</td>
</tr>
<tr>
<td>Limiting &lt; Free</td>
<td>•</td>
<td>BA</td>
</tr>
<tr>
<td>Normativ &lt; Flexible</td>
<td>•</td>
<td>BB</td>
</tr>
<tr>
<td>Concerned &lt; Unconcerned</td>
<td>•</td>
<td>CB</td>
</tr>
<tr>
<td>Consistent &lt; Not Consistent</td>
<td>•</td>
<td>CC</td>
</tr>
<tr>
<td>Unsafe &lt; Safe</td>
<td>•</td>
<td>FF</td>
</tr>
</tbody>
</table>

Journey that had been visited areas in homeland or foreign country hasn’t been effective alone on success of the course (only two students have been in foreign country).

It has been observed that listened music type (especially rock music) has been effective on success (Table 7).

Table 7. The effects of the music that has been listened to by the students on the success.

<table>
<thead>
<tr>
<th>Music Type</th>
<th>Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turkish pop music</td>
<td>0%</td>
</tr>
<tr>
<td>Turkish folk music</td>
<td>10%</td>
</tr>
<tr>
<td>Original music</td>
<td>15%</td>
</tr>
<tr>
<td>Foreign music</td>
<td>20%</td>
</tr>
<tr>
<td>Turkish art music</td>
<td>25%</td>
</tr>
<tr>
<td>Rock music</td>
<td>30%</td>
</tr>
<tr>
<td>Classic music</td>
<td>35%</td>
</tr>
<tr>
<td>Jazz</td>
<td>40%</td>
</tr>
<tr>
<td>Metal</td>
<td>45%</td>
</tr>
</tbody>
</table>

Effective factor hasn’t been found on evaluation of spare time.

It has been observed the students who watch the comedy programs have been more successful than others (Table 21).
Table 21. The effect of the TV programs on the success.

<table>
<thead>
<tr>
<th>Grade</th>
<th>TV series</th>
<th>Documentary film</th>
<th>News program</th>
<th>Sport program</th>
<th>Comedy program</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>BA</td>
<td>6.90%</td>
<td>6.90%</td>
<td>6.90%</td>
<td>6.90%</td>
<td>6.90%</td>
</tr>
<tr>
<td>BB</td>
<td>17.24%</td>
<td>17.24%</td>
<td>17.24%</td>
<td>17.24%</td>
<td>17.24%</td>
</tr>
<tr>
<td>CB</td>
<td>20.69%</td>
<td>20.69%</td>
<td>20.69%</td>
<td>20.69%</td>
<td>20.69%</td>
</tr>
<tr>
<td>CC</td>
<td>31.03%</td>
<td>31.03%</td>
<td>31.03%</td>
<td>31.03%</td>
<td>31.03%</td>
</tr>
<tr>
<td>FF</td>
<td>44.83%</td>
<td>44.83%</td>
<td>44.83%</td>
<td>44.83%</td>
<td>44.83%</td>
</tr>
</tbody>
</table>

Architectural design principles valid for other art fields such as painting, music, sculpture, literature, photography, dance etc. for this reason, in this study has been investigated whether the students have an interest any art field. According to results, frequency of going theatre has partly effective on the success.

4. Conclusion

The education system which has been effective at last years especially in developed countries has required to use multiple cultural structure, social reconciliation and cultural wealthy as a tool. Following of the same approach has been necessary for our county that is cultural diversity. Therefore, education and result product will be removed from be ordinary by utilizing from the students who has come from different culture.

In the study, it has been tried that the effects of socio-cultural structure that is own by the students have been determined on architectural education by aid of the students’ education before undergraduate, family structure and socio-cultural tendencies that have been effective on constituting the background and knowledge compile. The survey questionnaires have been prepared by selecting from factors that thinks to be effective on children growth. The influences of these factors on education have been researched by comparing with the success of them at the Basic Design Course.

The main result of the study, according to data obtained from survey and observation, is that the student hasn’t been growth freely to reflect differences of their cultural and social because of training with the same educational system. Another striking result is that women have become more successful than men. One-way responses have come about the
A foreign county experiment that has been expected to be effective on success but not reflect to result, situation of working/not working, being interested in art. Therefore these values haven’t been deeply investigated.

The negative results of the educational systems that students has educated for architecture or other departments in Turkey has reflected the survey study which had been performed on department of architecture, KTU. Even though the students have come from different region of Turkey, this difference hasn’t been felt on the survey result and they have been educated ordinary. The previous of undergraduate education should be renovated and an education system which has revealed students abilities and been democratic and free should be constituted.

Notes:
1. The students' grades that had been taken from the Basic Design Course was obtained from Prof. Dr. Gülay Keleş USTA and Res. Ass.Demet YILMAZ.
2. Works of basic design has been received from archives Ass. Prof. Dr. Asu Beşgen Gençosmanoğlu.

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MODEL SUGGESTION RELATED TO BASIC DESIGN COURSE IN ARCHITECTURAL EDUCATION

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ABSTRACT

The basic design course has been taught as obligatory in the first year of department of architecture, interior architecture, city and regional planning and landscape architecture. The course that has been taught to improve creativity and imagination of students has made design skills strong and supported the project courses.

There are some problems related to basic design course. First of all, knowledge that has been given in basic design course couldn't be become a united whole with project courses and the others. The second one is that the course couldn't be understood by students because of teaching term. Therefore teaching of this course should be regulated again. Also it is imported to fallow today's because of innovations in architecture field, improving technologies, variety attaining the knowledge and speed of attaining the knowledge. When it has been considered position of basic design course in architectural education, new developments and problems that was determined, the course should be reappraised. For this reasons the course has been consider on six title that are content, scope teaching term and period of the course, theoretical knowledge and applications, used tools and material supplies and contribution to project courses. In this study has been determined a panel group that consisted of eight university teachers who are building professorship. With this group has been determined existing position and the course reconsidered according to today's conditions. In this way, a new method has been suggested for basic design course according to six title that was determined before and expert view in this study.

Keywords: Delphi method, Basic design, Architecture, The First Year of Education, Education
1. Introduction
Basic design course has been taught at first year at the department of architecture and the other art and design department. The course that has been taught to improve the design and aesthetics sense of students has included various difficulties from the point of view students and lecturers. When it is considered from the point of view of student, before education which is without comprehensive of him/her and architectural education is so different from each other. Well then it has been in demand from him/her considering, interrogating and discussing. We can arrange these difficulties as coming from socio-cultural background whose structure most probably block versatile thinking and there is no basic for design and creativity at the student etc. As for from the point of view of lecturer, the difficulties are to improve of creativity of poor educated students, teach him/her aesthetics values, explain him/her architectural, local and general concepts (Onur, 1998). At this term that has been earned architectural point of view to students, it has been expected from lecturers renovating themselves, being dynamic, creativity and broad-minded (Aytaç, 2000). Making acquire a new language and point of view is difficult and painful term. Investigating of this first term that explain above from the point of view lecturers and students and the basic design course which has been taught at this term is imported because of being first course that has been explained basic design principles at architectural education. In this study, importance of the course, difficulties during teaching, period of the course changing and improving up to conditions, method of teaching, tools, content of the course have been examined from the point of view application and evaluation. Determined these six topics for the course has been constituted basic of teaching model that is in demand to be formed. Constituting of the model has been used Delphi techniques. This research technique has been chosen because it estimates relating to future, brings up expert opinion, provides reaching an understanding and has got flexible structure (Şahin, 2001). Also the course has been cross-examined from the point of view of student. At department of Architecture, KTU, in final exam has been asked students for criticizing of things that has been lived during term in course. In this way, it has been learned student opinions about the course and brought up how the students understand the course.

2. Basic Design Course In Architecture
Basic design education has been focused on the sight since years, tried to systematize existence of visual language and improved methods according these. This language of art education that had been constituted with ability of learning and teaching dimensions and has been based on psychology and
visual has been used as a tool to comprehend the art and to form infrastructure for creativity artistic activity (Seylan, 2005). This course also has acquired to students information and talent that would use daily life. Basic design is required not to see as only a course. The background of the student whatever happens; the course has improved design skills of the students. It has taught the student taking a responsibility, being a systematic, thinking, using of time fruitful, being self confidence, group working, asking question, being active in society and discussing.

The basic design has been taught as vocational course at departments that based on art. The aim of the course is the same in our country and on the world in spite of teaching different methods. The course that consists of the experimental works to explain main principles of creativity activities to students firstly had been taught in Bauhaus School in 1919 (Çevik, 1992). The course had been presented different approach up to person who taught it. The school had been closed by Nazi pressure in 1933, and lecturer of it scattered others countries first of all USA. Therefore approach of Bauhaus and so basic design course has become widespread all over the world. The basic design has maintained its position in art education together with technology and science.

This process at Istanbul Applied Fine Arts School of Higher Education, in Turkey had been performed by name "Basic Design Education". Afterwards, it has been kept on at different department with different name (Seylan, 2005). Since 1982-83 years it had started to teach as compulsory course. As for at the department of architecture, KTU, the basic design course started to teach by name Basic Course in 1963 (Güngör, 2005).

At the department of architecture- architectural education is four year, KTU, the course has been taught by Basic Design name. The course made as workshop has been given two days-6hours-in week. The course that consist of theoretical and practical section has been taught by five lecturers (four of them are associate or full professor and one of them research assistant). While the theoretical section of the course has been explained the whole class, the practice has been made with four groups-each group consist of 15 student. Contents of the course; the element of design and principles of design, visual communication and perception on visual arts, connection with shape between ground, space, form and geometry, space in architecture, to make on the issues which content design principles and design element, to development of the perception of the two and three dimensional organization in different media. The course has been performed as practice and homework. Also the examples of results and environment of class have been presented at figure 1. 2
3. The Method

In this paper has been discussed contents of the Basic design course that has been taught at the department of architecture, KTU and has been one of the beginning courses to perform completely its function that has been undertake in education. It has been used Delphi technique that is suitable for this subject. Firstly one panel group that has been chosen from associate or full professor who are in building science at department of architecture, KTU has been constituted for this. As an election criterion has been searched for being teach/taught this course or the other basic course that has been taught at the first class at department of architecture. Because of this the panel group has been consisted of 8 lecturers who are associate or full professor and research assistant there. The reason of the selection of the lecturer from KTU is that every educational foundation has own training method and reason-result relation can be observed much better. This research- seen as first step- later can be enlarged according to opinions of experts who are in general of Turkey or/and on the world.

The Delphi technique has been performed as three stages. The first stage survey has been prepared by taking opinion of lecturers who are experts about measuring and evaluation in educational science. The first stage has been realized by asking open-pointed question to people who are expert in their subject. The second Delphi survey has been prepared according to explanation and critique that had been obtained from the first stage. In this survey, it has been asked to them which of classified knowledge find acceptable. In the last stage, the second Delphi survey that had been update according to the data obtained from 2nd survey has been steered into lecturer. It has been asked for the panel group to evaluate the updated survey. Therefore, it has been made feed-back to them during process. By performing of 3rd survey the outcome product has been gained. The process has been completed with items and suggestion that the panel group has/hasn’t been come to an agreement related to contents of the course. Eight member of the group have been participated in three stages.
4. Evaluation
In this part of paper has been discussed data that had been acquired by Delphi technique and evaluation of “criticize please the course” question that had been asked for student who are in the freshman class at the Department of Architecture, KTU to get opinion of them about the course. Analysis of the survey which had consisted of six topics has been made by using SPSS and excel software.

Questions related to period; when it has been asked panel group their opinion related to period, term and year of the course, they hasn’t been come to an agreement completely about term and period of the course. Answers related to term of it is that; “It should be taught at the first and second term of the first year” and “It should be taught at the first and second term of the first year and at 3\textsuperscript{rd} and 4\textsuperscript{th} years as a elective course” (Table 1). While two members of group has come to an agreement on the same alternative-it should be taught at first and second term so as to 4+4- about term and period of the course according to years, the others has answered different from each other. Point that all participants has come to an agreement is the course should be taught at the first and second term. Point that all of them hasn’t come to an agreement is the teaching period and it should be taught at 3\textsuperscript{rd} and 4\textsuperscript{th} years as a elective course.

Table 1. The term/year of Basic Design Course to teach

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>VValid It should be taught at the first and second term of the first year</td>
<td>4</td>
<td>50,0</td>
<td>50,0</td>
<td>50,0</td>
</tr>
<tr>
<td>It should be taught at the first and second term of the first year and at 3\textsuperscript{rd} and 4\textsuperscript{th} years as a elective course</td>
<td>3</td>
<td>37,5</td>
<td>37,5</td>
<td>87,5</td>
</tr>
<tr>
<td>It should be taught at the first and second term of the first year and at 3\textsuperscript{rd} and 4\textsuperscript{th} years as a elective course</td>
<td>1</td>
<td>12,5</td>
<td>12,5</td>
<td>100,0</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>100,0</td>
<td>100,0</td>
<td></td>
</tr>
</tbody>
</table>

Questions related to teaching methods; teaching way of the course (practical and theoretical) experts have given the topic- at the first term
should be taught basic design concepts and components and at following term the course should be taught so as to combine space concept- a lot of attention in comparison with %28. as the second, three topic that has been given attention in comparison with %18 by them is that firstly theoretical knowledge should be taught and later applications done, some activities should be arranged during term to protect the inclination of students, approach of the course should be changed; imagination power of students shouldn’t be limited (Table 2). From the other side, it has been asked to lecturer if theoretical knowledge is enough for practice. In this subject they have been like-minded on alternative of “mostly happen”(Table 3).

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mostly don’t transfer Transfer of middling quality Mostly transfer</td>
<td>1</td>
<td>12,5</td>
<td>12,5</td>
<td>12,5</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>100,0</td>
<td>100,0</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Sufficiency of theoretical knowledge for practice

- Theoretical knowledge should be taught at first two-three weeks and at following weeks should be done application.
- At the first term should be taught simple concepts and at following term should be taught more complex concepts.
- At the first term should be taught basic design concepts and components and at following term the course should be taught so as to combine space concept.
- Firstly theoretical knowledge should be taught and later applications done.
- Approach of the course should be changed; imagination power of students shouldn’t be limited.
- Different techniques should be examined on applications.
- Some activities should be arranged during term to protect the inclination of students.

Table 2. Expert opinions related to teaching way of the course
The other question connected with teaching methods has researched their approach about that the course can be taught by lecturers who are in another vocational group or artists. While the most of lecturers have chosen the alternative- I think they should join to course up to items, two lectures have chosen the alternative-I’m finding positive to join of them to course as group teacher Table4.

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’m finding positive to join of them to course as group teacher.</td>
<td>2</td>
<td>25,0</td>
<td>25,0</td>
<td>25,0</td>
</tr>
<tr>
<td>I think they should join to course up to items</td>
<td>6</td>
<td>75,0</td>
<td>75,0</td>
<td>100,0</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>100,0</td>
<td>100,0</td>
<td></td>
</tr>
</tbody>
</table>

*Table4. Approach about that the course can be taught by lecturers*

Also when suggestion had been asked for participants related to teaching way of the course, they have said in comparison with %28 the item- At the first term should be taught basic design concepts and components and at following term the course should be taught so as to combine space concept and %18 the items-Firstly theoretical knowledge should be taught and later applications done, Approach of the course should be changed; imagination power of students shouldn’t be limited and Some activities should be arranged during term to protect the inclination of students.

*Table 5. Suggestions related to teaching way of the course*
Questions related to tools: the experts’ opinions about that applications connected with the course has been done on computer; items- computer shouldn’t be used to improve hand skills at first term; it can be used following terms, some applications and homework can be done on computer provided that sketch and design make on paper- in comparison with %37,5 have been accepted (Table 6).

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12,5</td>
<td>12,5</td>
<td>12,5</td>
</tr>
<tr>
<td>1</td>
<td>12,5</td>
<td>12,5</td>
<td>25,0</td>
</tr>
<tr>
<td>3</td>
<td>37,5</td>
<td>37,5</td>
<td>62,5</td>
</tr>
<tr>
<td>3</td>
<td>37,5</td>
<td>37,5</td>
<td>100,0</td>
</tr>
<tr>
<td>8</td>
<td>100,0</td>
<td>100,0</td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Being applications on computer in design course.

To question- which tools should be used in basic design course up to you?- all lecturers have emphasized that every kind of materials can be used during practice and the students have been not limited about this.

Question related to content: in question- What do you think about content of the course?- in comparison with %62,5 lecturers have said item- it should be taught at two terms, the whole concept should be taught at the first term and over problems related to architecture topics at the other term (Table 7).
In the other question related to content—Should the content and extend of the course be changed in your opinion?—in comparison with %50 lecturers have explained their opinion—The content of course should be changed so as to be provided relation between course and design project (Table 8).

What are the difficulties that students have met in Basic Design course in your opinion? Please arrange according to your priority like 1,2,3,4,5, etc. At the first three arrangement, in comparison with %93 not training suitable for design before, %82 coming from without comprehending training system of students, %81 preferring the job as unconscious have been presented (Table 9).

It has been asked for what the participant think about establishing relation between the Basic Design course and Architectural design Studio. The half of participants has answered this question as mostly transfer (Table 10).
<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>content of the course is enough&lt;br&gt;The content of course should be changed so as to be provided relation between course and design project. it should be organized around space design to provide relation between the course and design project. Content of the course is enough; lecturer of the design project should support the content and make a feed-back with Basic Design course during the design project course. The content of the course should be renovated as to necessity of era. Questions should be renovated according to experiences, sense reception and perception of the students</td>
<td>1</td>
<td>12,5</td>
<td>12,5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12,5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4</td>
<td>50,0</td>
<td>50,0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>50,0</td>
<td>62,5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>12,5</td>
<td>12,5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12,5</td>
<td>75,0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>12,5</td>
<td>12,5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12,5</td>
<td>87,5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
<td>12,5</td>
<td>12,5</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>12,5</td>
<td>100,0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>8</td>
<td>100,0</td>
<td>100,0</td>
</tr>
</tbody>
</table>

Table 8. Should the content and extend of the course be changed in your opinion?
Coming from without comprehending
Not doing skill exam
Not being familiar the tool that should use
Cultural and social environment
Not being clear of the problem so as to
Economic problems at supplying

Table 9. What are the difficulties that students have met in Basic Design course in your opinion?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full happen</td>
<td>12,5</td>
<td>12,5</td>
</tr>
<tr>
<td>Mostly happen</td>
<td>50,0</td>
<td>62,5</td>
</tr>
<tr>
<td>Happen of middling quality</td>
<td>12,5</td>
<td>75,0</td>
</tr>
<tr>
<td>Mostly don’t happen</td>
<td>25,0</td>
<td>100,0</td>
</tr>
<tr>
<td>Total</td>
<td>100,0</td>
<td></td>
</tr>
</tbody>
</table>

Table 10. Establishing relation between knowledge that the students have been learned in the Basic Design course and the Architectural design Studio.

Relative to evaluation, to question-how should application and homework that students have done them in extend of the course be evaluated?-participants have said that in comparison with %32 It should be criterions at evaluation of homework, %24 It should be arranged juries, %19 Applications and homework of the whole class should be evaluated together by responsible lecturers (Table 11).
Applications and homework of the whole class should be evaluated together. It should be criterions at evaluation of homework. It should be evaluated homework and applications which were done during done as homework. It should be explained to student evaluation of application and homework. It should be arranged juries. It should be evaluated together with lecturer and student. It should be given to student defense right.

Table 11. How should application and homework that students have done them in extend of the course be evaluated?

Another question relative to evaluation is what percent of criterion should be in evaluation of homework and applications. Value of the percents that are repeated at most according to participants it’s as follows; (Table 12)

<table>
<thead>
<tr>
<th>Percent</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>%40</td>
<td>Perceived of the problem</td>
</tr>
<tr>
<td>%20</td>
<td>Originality of work</td>
</tr>
<tr>
<td>%10</td>
<td>Suitable for drawing format</td>
</tr>
<tr>
<td>%10</td>
<td>Delivering on time</td>
</tr>
<tr>
<td>%10</td>
<td>Arrangement and purification of drawing paper</td>
</tr>
<tr>
<td>%10</td>
<td>The originality of tools that are used to solve problem</td>
</tr>
</tbody>
</table>

Table 12. Distribution of criterions according to percents

Lecturers has said about question what the difficulties are, while you are evaluating the homework and applications that in comparison with %43 number of students are too many, %38 evaluation include subjectivity.
Also, it is remarkable evaluation of the freshman connected with the course. Firstly the students have clarified that they hadn’t been educated this side, had known nothing about the course at the first term and had been forced to understand it. Educator has been content face to face with students who hadn’t been educated directed towards design and creativity. This issue isn’t special to department of architecture at KTU, it has been seen the other department of architecture in Turkey.

The students who had thought why it taught through at the beginning, later has said that they had understood much better the course, found pleasure in producing and practicing after certain time. Opinion among the students related to the course is alternation which the students have felt on own. They have emphasized that their point of view changed and they learned looking by analyzing their environment. They have expressed they learned how design, they has looked for design principles in their environment.

The Basic Design Course has been seen as term which they made first experiment connected with design, passed by feeling creation pleasure and by students. Common opinion among the students is confidence to be much better in future.

5. Conclusion
Content of the course that has been taught to improve the creativity and aesthetic view of students is important owing to not educating in this subject the students before. The course that has been taught necessary principle for design has been investigated in this study, when its importance has kept in mind.

Topics of evaluation that are period of the course, teaching method, the tools, assessment of applications and homework has been consider according to view of education experts.

The course should be taught at least two terms in respect of experts who have participated in the survey. The other point is design principles that have been taught in the course should be established relation with architecture. There are no participants who find affirmative using computer during design as unconditional. They have said the computer can be used only certain level. The background education of the students is inadequate and restrictive for architectural education. Also a large number of student, including subjectivity of evaluation are important points related to assessment of applications and homework.

According to students’ point of view the course was difficult at the beginning. However, the most of students have understood the importance of the course and they have begun to feel its effect in their life.

This study has performed at department of architecture, KTU because of being more useful of the Basic Design Course. This research- seen as first
step- later can be enlarged according to opinions of experts who are in general of Turkey or/and on the world.

Notes:
1. It has been asked students who are in the freshman class in 2007-2008 fall term at the Department of Architecture at KTU for criticizing of the Basic Design Course. In this study has been benefited from these reviews.
2. Works of basic design has been received from archives Ass. Prof. Dr. Asu Beşgen Gençosmanoğlu.

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TURKISH STUDENTS’ FIRST EXPERIENCES IN DESIGN EDUCATION

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ABSTRACT

This study is proposed to support/enhance the general aim of the Leonardo da Vinci pilot project “Designtrain” propped up by EC whose objective is to prepare an educational guidance for the first year design students in order to lessen the difficulties that they face with in their departments. In departments of architecture students in their first year of education run into problems of adaptation or have difficulties to adapt to the new language because of their individual capabilities and adequacies, their relation with the instructor or because of the departments’ methodology of teaching. The study which is made among ten architecture departments in Turkey is formed to reveal these difficulties from the students’ point of view by means of a survey. The survey consists of interpretative questions that are related with the prerequisites of vocational education, difficulties in learning, evaluation of their comprehension of the basic design principles and difficulties of educational process.

In the course of the survey the comparative influence of the priory instruction about the vocation and the eagerness to vocation was tested and as a result of the general assessment it is seen that when compared with the eagerness, instruction has more convincing positive influence.

In consequence, because of the fact that in Turkey students are accepted to the universities according to their results in the national exam, in-curricular or extra-curricular activities that inform about architectural culture will have a affirmative effect in students’ preparation to design education. According to the recommendations of the students, it is claimed that it would be beneficial to support and update the ongoing teaching methodologies with novel techniques or (technological) softwares.

Key words: the 1st year architectural education, freshman difficulties, design basic, technical drawing, student proposals
1. INTRODUCTION
Students are tended to learn what they are directed to before their entrance to the universities. For the students who didn’t have the chance to qualify themselves in prerequisites of design departments, to be forced to design is like entering to a new world. To abstain from the language and culture of architecture before entering to the university has negative effects on educational process. Because of the obligation to this new language, architecture students run into difficulties and adaptation problems during their first year education. As regards, the Leonardo da Vinci pilot project Designtrain propped up by EC is in aim of preparing an educational guidance for to decrease the difficulties that the students face with during their first year education. As regards this study which is prepared for to detect where the density of the difficulties increase, is proposed as a supportive unit for designtrain.

1.1 The Problem Parameters
The parameters that cause difficulties in first year education are various.

The problems that are related with the student: Cultural background and familiarity to cultural way of thinking are important. (Cross, 1982). The insufficiencies of the high school education for preparing the students to cultural and technical structure of the architecture or design departments for to smooth the way reveal itself as a negative effect. As a result, it can be asserted that the vocational tendency evaluation tests will be effective as they direct students to these departments. Accordingly, the designtrain project prepared a self evaluation unit for vocational guidance.


The problems that are related with students’ relation with the instructor/professor: Because of the fact that the students are not ready to the new system, the contribution of teaching in learning is very important. The reciprocal learning/teaching relationship is a phenomenon in
the design studio. Schön pointed out that there are several levels of learning in the process of reciprocal reflection-in-action. “The student learns both about designing and about learning to design…Further, the student learns about design in the same process by which she learns about designing” (Schön, 1985).

Baynes states that the effectiveness of a design education is related with the children’s thinking abilities and the method of learning by doing. Instructor’s doing their work free will have a key role in children’s aesthetic development in their education. (Key Baynes, 1985) However, since the revision of the pre-university education to support the academician architects try to decrease the difficulties with respect to their knowledge and interest areas. It is thought that to specify what the problem is from the student’s point of view will be an important supportive source for to enhance the productivity of these studies.

2. METHOD
As mentioned above, although architecture schools differ according to their approaches (traditional or constructionist), it is clear that all aim at developing multi-dimensional thinking, conceiving, interpreting skills and students’ abilities to make the right decision. To form and to develop the architectural language and culture are the initial objective of the first year education programs. In that respect, the educational guidance unit of the Designtrain is carried out for to contribute to the solution of the problems mentioned above. In order to define the problem by means of determining the difficulties that the students face with in departments of architecture, a survey is carried out among architecture department students’ of 10 universities in Turkey. By means of this survey; The factors of vocational choice, Their eagerness to the vocation, The subjects which are hard to comprehend, Their solutions to their own problems are aimed to be identified. The input is evaluated by the aid of SPSS program.

The universities that participated to the survey are; Çukurova University, Erciyes University, Mersin University, Yıldız Technical University, Selçuk University, Mimar Sinan University, Gazi University, İzmir High Technology University, Koçaeli University, İstanbul Technical University.

The urban planning department in İzmir High Technology University and the urban planning and interior design department in İstanbul Technical University are also included within the survey as they take the same courses in their first year education. In this survey, students are not asked to give
their identification information, in order for students to objectively evaluate both themselves and the method carried out in their universities.

3. PRACTICE
The survey which is made to 450 participants can be divided into four parts according to their contents.

3.1. Entrance to the vocation: The first part of the survey consists of questions that are related to entering vocation. Eagerness, the reason for choosing architectural department, former knowledge about architectural practice, and the compatibility of this knowledge to the educational prerequisites are examined within the scope of the first part. Besides the students’ awareness about architectural education, also their interest, acquaintance and knowledge about architectural vocation and their future plans are evaluated with respect to their answers to the question “Before preferring to study architecture, did you know how to do technical drawing?” within the framework of the first part.

In Turkey students are accepted to the universities according to the results of a multiple choice national exam. As regards, students’ will to different departments in other words their “eagerness” order is determined according to their success in the national exam. In such that kind of a situation eagerness to architectural education will be/appear to be in below ranks and students participate to architecture education without any “eagerness”. Consequentially students are requested to answer whether they enter to architecture departments eagerly or not.

As a result, among 450 survey participant, though 38 of them stated that they did not come to architecture departments eagerly, 147 of them told that they eagerly chosen architecture. In order to clarify the reasons that made students to choose departments of architecture, students are requested to mark one or more choices below. The choices and the number of students that mark each choice are given below according to rank.

I was influenced by the architecture(s) close to me :114
I chose the department because my score on Student Selection and Placement Examination was sufficient for this department : 174
The determinant role of university entrance examination on students’ choice of architecture departments takes attention/is clearly seen in the survey results. It is also seen that the guidance of vocational counselors and introductory booklets are not effective as the others.

As a result of the survey, it is clearly seen that though 321 participants stated that they have a former knowledge about architecture/architectural
education, 129 of them told that they have no idea about what is architecture or architectural education. Not contented with the information achieved students are requested to reply whether the information they acquired before their entrance to architectural departments is compatible with the one you acquired following the admission to the Department or not. 82 participants among the ones who has former knowledge about architecture stated that the knowledge they have attained previously is very compatible with the one that they acquired during their architectural education. Among 321 participants, though 230 of them stated that their former information about architecture is slightly compatible with the knowledge taught in architecture departments, 14 of them told that there is no compatibility. As a result of the survey it is seen that the majority of the students have neither adequate, nor accurate knowledge about architecture.

To the question “did you know technical drawing before you enter to the department of architecture?” among 450, 20 of them said “yes”. Although 74 of them told that they have a little bit knowledge, 355 of them replied as “I had no idea”.

3.2. Difficulties in Architectural Expression: The second part of the survey is prepared to detect learning difficulties of the students. By means of the Likert scale, students are asked to express how much difficult the titles given below.

In his group, the questions;
“To perceive the structural system of three dimensional objects and to express it via technical drawing …
To draw the perspective of an object from its plan, elevation and section …
To draw the section of an object, the perspective and the measures of which are given…
To make design on an abstract concept…
When I was asked to design something, I realized that I should reflect on many different issues. Coping with this was…” appeared to be the most difficult ones to comprehend. (See table 1) The titles (a) “to change the measure and to work with measures”, (b) “to estimate the requirements of its users and to meet them accordingly” and (c) “to learn about the measures pertaining to the site and to its fittings” are marked by the students as the easiest ones.
To the question “Do you believe that your perception of three dimensions would be easier if it were explained via some other method?” 79 of them replied as “yes” and 205 of them said “may be” to this question. If the ones who have no idea are excluded, the vast majority of the participants consisting of 284 students are in expectation of a new methodology of teaching and learning. Additionally these students think that the new system will work better than the ongoing one.

92 students have a proposal about a new method or working system. The vast majority of these students stressed on the introduction of digital technologies to the contemporary field of architectural education. They claimed that with the aid of digital technologies, the teaching of most subjects will be better. They have also stated that the process of architectural production would be easier if 3d modeling tools are taught better or more affectively in departments of architecture. They have also told about the importance of animations and video presentations. Another subject that is claimed to be important for the future is stated to be the importance of the behavior of the instructors.

3.3. The comprehension of the basic design: in the third part
students are required to evaluate subjects related with “apprehension” of basic design principles.
Table 2. Success from basic design principles

With the question “Please score the options from 1 to 10 according to the level of perception” students are requested to evaluate themselves with respect to the titles. (See table 2) In this part, it is seen that the topics related with hierarchy are declared to be the most difficultly understood ones when compared with the others.

3.4. Difficulties of educational process: The fourth part on the other hand consists of interpretative questions that are related with the difficulties that the students come up with during their education.

According to the results of the survey it is seen that the majority of the participants is agree with the statements that, “Not knowing the way my design is going to be evaluated hardened my perception regarding the method I should choose” and “The fact that there is no single “correct” in our job makes it difficult for me to understand whether my work will succeed or not”.

“The fact that there are not many resource books I can use as reference makes it difficult for me to proceed with my work.” The insufficiency of books that are convenient to first year education tenets is declared to be a difficulty.

“The fact that the resource books I shall use are not directly related to my area of search makes it difficult for me to proceed with my work.” The indirect relation of books to the area of research or to the field of study is
stated by the participants as another difficulty that they face with during their first year education.

Although their agreement to the statement which has a negative connotation “instructors should not teach the lessons by making use of examples too frequently” forms the majority part, the marked number of choices “I don’t agree” and “I strongly oppose” also increased/raised when compared to the previous question. As it is well conceived from the proportional incoherencies of the results of the two statements which are used in order to make a cross-check, the participants did not pay their full attention in reading and conception of the statements.

As the greater part of the students either stated that they have no idea or did not agreed with the statement that “it is hard for me to use the instructions made for the group while working on my own”, it can be said that students are able to benefit from the instructions made to the group.

“I am quite shy while interacting with the studio instructor personally and therefore cannot ask everything I should.” Although, there are students who have timidity in their personal relation with the studio instructor, it is seen that the majority don’t have such that kind of problem.

The students’ disagreement with the interpretations emphasized in questions 6 and 7 can be clearly seen from the table below. (See table 3) In other words it can be asserted that students don’t have any problems following the explanations of the studio instructor and they don’t have any difficulty or timidity in asking questions.

![Table 3. Comments on educational process](image-url)
4. THE EFFECT OF KNOWLEDGE AN EAGRENESS IN SUCCESS
Because of the fact that in architecture departments of the universities in Europe it is possible to evaluate the knowledge and capabilities required by the architecture departments in the university entrance exams that are done among the students who have eagerness to enter architecture departments, it is thought that to examine indifference of the eagerness and knowledge of architecture department students in Turkey from other students will be useful.

4.1. The success of the ones who have compatible knowledge in technical subjects
Both the student who have no information about architecture and the ones that have disinformation about the vocation are also enter to the departments of architecture. As regards, the inquiry on the subject that whether there is a difference in success of students that have the right priory knowledge about the architecture departments and the ones that do not is thought to be valuable for the general framework of study. Though, 122 students stated that they haven’t any previous knowledge about architecture, 82 of them told that the knowledge that they have learned after entering the architecture department is compatible with the information that they had acquired peviously. A comparison between these two groups is made by means of Crosstab method.

It is seen that the ones who don’t have previous knowledge about architecture face with difficulties in perceiving the depth of objects and in conceiving the third dimension. It is seen that however to have information does not have any positive effect in studying with models; the students who have former knowledge about architecture are more successful in drawing plan, section and elevation via model. It is noticed that to comprehend the structural system is more difficult for the students who have no former knowledge than the ones who have priory information. To draw a section from the plan and elevation measurements has similar results for both groups. In drawing perspective the students who have prior knowledge have fewer difficulties.

4.2 The success of students who dreamed architecture in design
Among 450 participants, 103 students stated that architecture was their dream till their early ages. It is seen as a result of the survey that dreaming architecture as a vocation is effectual in comprehending and understanding basic design principles, investigated. As a result of the survey it is seen that for the students to imagine architecture as the most appropriate vocation is
not effectful in their success when compared to the other students. As a result of the survey it is seen that such eagerness is not effectual for the success of the students. It is seen that the students who imagine architecture as their vocation more easily learn the subjects; -such as structural system, the user requirements, space and construction measurements, that the other students see as difficult in comprehending.

5. FINDINGS/RESULT

During the education the three factors that increase the success is appeared to be as such; the eagerness to the vocation, choosing the vocation after attaining information about it, having the abilities that are necessary for the vocation.

Entrance to the vocation: As a result of the survey, it is seen that the university entrance exam is the most determinant factor in students' entrance to the universities. Their feelings that they are talented about architecture and their astonishment from the architects that are close to them follow it. Vocational counselors and Introductory Booklets on Profession don't have noteworthy effect on their decision for choosing the department of architecture. 18% of the participant students stated that they have acquired knowledge about architecture almost nearly to reality. This ratio shows us that the presentation of the vocation is actually inadequate. The ratio of the students who didn't know technical drawing is noticed to be %79 of all.

Difficulties in learning: the topics related with structural systems, or to draw the perspective and section of an object whose measurements are known are seen to be the difficulty understood subjects. With respect to this, it can be asserted that to give more emphasis to subjects related with perspective and structure in curricula will be suitable. It is stated that students have difficulties in abstract thinking and coping with complicated problems. The ratio of the students who claim that another method will be more effective than the one now carried on universities is %63.

Comprehension: it is noticed that among the subjects related with basic design, the concept of hierarchy is stated to be the least successful one that students feel themselves. In Turkey, through the pre-university education programs, only the students' abilities of algorithmic thinking and problem solving are developed. As regards, some other supportive activities are needed for to provide the adaptation of the students to the subjects related with abstract concepts and creativity. These can be organized as in-curricular or extra-curricular facilities, which could introduce students to the general framework of architecture culture. It is clear that these activities will
be effectual not only in decreasing the difficulties of first year architecture department students, but also beneficial for other vocation fields.

Education process: not knowing the method and way of evaluation, the lack of single “correct” answer, the fewer amounts of books that are related with basic design tenets and the lack of sources that directly formulate the subjects taught are declared as difficulties by the students. In the questions that evaluate the technical difficulties of the students who has no former knowledge about architecture, as a result of the comparative analysis of the students who declared that the information they have attained formerly is compatible with the knowled taught in architecture departments, it is observed that the majority of students with former knowledge learn more easily than the others. It is confirmed that to study with scales and measurements, to study with models, to draw a section from plan and elevation, to estimate the requirements of the users and to make a design according to these requirements have no significant effect for it. It has significant effect in comprehending the structural system, user requirements, the measurements of space and equipment when compared with the other subjects. Students propose computer modeling techniques, digital and material models as the instruments that make the understanding of the subjects easier. Such that kinds of changes in syllabus and method of the departments, will provide more productive and comfortable education term.

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