DESIGNingDESIGNEDUCATION
designtrainCONGRESS
Amsterdam, The Netherlands 05-07 June 2008

DESIGNingDESIGNEDUCATION PROCEEDINGS PART II

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TRAILER 2

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DESIGNTRAIN CONGRESS TRAILER II PROCEEDINGS

DESIGNing DESIGN EDUCATION

PART II

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Designtrain project is supported by the European Commission – Leonardo da Vinci Programme, Second Phase: 2000-2006

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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 DESIGNTRTAIN 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
- Building Equipment Company – Seminars and Workshops / Construction Areas – Look and Learn / Interdisciplinary Thinking: Integrated Courses – Civil - Mechanical Engineering, Geodetics, Economics, Arts
- 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

- Globalization versus Localization in “Design Education”
- “Design” as a Common Language of Nations
- Cultural and Local Effects on Design Education

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 Kirci 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,

Asu BESGEN GENCOSMANOGLU
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APPROACHES CONCERNING THE SOLUTION OF A DESIGN PROBLEM IN BASIC DESIGN STUDIO

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ABSTRACT

Introduction

The first year of transition from primary education to university education is critical for the institutions which give design training. The student profile of those coming from the primary education necessitates finding concrete answers to the questions given with concrete data. However all long architecture education the students are given abstract and visual data and are asked to create concrete designs as final product. In this period, students face such problems frequently inside and outside the studio environment and sometimes they lose hope unable to find a solution. It is only possible to get through this hard and saddening period with gaining experience and the communication between the student and the lecturer is somehow useful in solving this problem.

Within the context of this study, the approaches for solution of a design problem applied as the final work to the freshmen of Basic Design and Plastic Arts Studio of the Seljuk University in the 2007-2008 academic year, fall semester are discussed.

Materials

The freshmen of the Seljuk University Faculty of Engineering-Architecture, Department of Architecture were taken as the field of the study. In this context a design problem applied as the final work to the freshmen of Basic Design and Plastic Arts Studio of the Seljuk University in the 2007-2008 academic year, fall semester and the samples of solution for this problem were taken as the material of the study.

Methods

In the context of Basic Design and Plastic Arts Studio, the basic design elements and principles have been analytically given to the students and at the end of the lesson they have been asked to provide solutions to a design problem making use of these data. The students were asked to complete the assigned design problem in one month. The material necessary for the comprehension and solution of the design problem were provided and students were informed through intermediary studio corrections. The obtained final product/final work designs were transferred to matrix tables through photographing and comparatively evaluated.

Results and Conclusion

As a result, the comprehension of the lesson in its entirety and the students' skills in providing solution to a design problem were investigated considering the solutions provided for the design problems by the students. Under the

light of such evaluations, it has been observed that the students' achievements, will and interest are reflected in the final product. It has been concluded that the final application conducted is important for the students who are in a period of transition to design problems and spatial design in view of improving their ability in providing alternative solutions and understanding the problematic of spatial design. It was also concluded that application of similar activities throughout the year might be useful in raising 3-D thinking skills, comprehension of spatial and problem solving skills.

Keywords: *Basic Design, design problems, basic design education, design studio, the first year design education.*

APPROACHES CONCERNING THE SOLUTION OF A DESIGN PROBLEM IN BASIC DESIGN STUDIO

Introduction

The skills that are given during university education are different from those qualifications attained during primary and secondary education and maintained at later phases of life. Since such an understanding is shaped through theoretical knowledge, methodology of thinking and applications in departments that provide design education they have an exceptional place among other departments that provide undergraduate education. Students are not accepted to architecture departments, which have design based curricula, through general skills tests in Turkey which result in various difficulties for the students and problems occur during the practice of education. Hence, basic design education gains importance as a medium of conveying systematic knowledge, a ground for intellectual querying and application.

Basic Design Education

Each and every design in architecture and other visual arts are based on a set of visual factors. These factors appear as designs after they are clarified in thought and edited using particular elements and principles. These designs are obtained through the expression of one's visual accumulation in a particular order and discipline (Itten, 1970). Basic design education is a method of education used for the development of a person's skills and the use and control of his visually-oriented accumulation. The concretization of the mental images in a particular order for any reason is called design, and the scientific discipline used in the development of the skills used during this process is called basic design (Hodgen, 1965). In other words basic design is systematically using a blend of the design methodologies and methods in education (Çınar, 1999).

Generally, Basic Design education is carried out under two headings. First, all the visual elements used during designing are defined. These are named the basic design elements and namely are: point, line, shape, direction, size, spacing, texture, movement, light-shading and color. The second heading is "the basic design principles" which aims at teaching how to use the basic design elements. This heading is sub-divided into two major groups. In the first place we have the use of basic design elements which is named fundamentals of basic design. It includes contrast, harmony, repetition and hierarchy. Secondly, the tools for criticising designs are listed which are called Basic Design Evaluation Principles. This includes the principles of dominance, balance and unity (Atalayer, 1979, Güngör, 1972, Gürer, 1990, Divanlıoğlu,1997, Çınar, 1999).

Basic Design Education at Seljuk University

Selçuk University offers architectural education since 1970s. Basic design and plastic arts is a 4-credit course offered during the first semester of the first year of education. The course contents embody basic design elements and basic design principles in a systematic way. This process moves from the simpler to the more complex. In short, the aim of the Basic Design course is informing the students on the transfer process of an abstract idea into a design and developing the skills concerning such processes. A two-phase approach is followed during the Basic Design course. The first phase includes the theoretical information concerning the issue (one hour) while the second phase includes offering practical solutions to the design problems asked in the studio environment.

Basic Design Education Final Design Problem and Application

During 2007-2008 academic year fall semester the courses were carried out following the programme designed in view of the aims and methodology of the course (Table 1) and applications were made. The applications included not only studio work but also homeworks to consolidate the subjects studied.

	Basic Design Elements							Basic Design Principles				
								Basic Design Fundamentals		Basic Design Evaluation Principles		
Date	05.10.2007	19.10.2007	26.10.2007	02.11.2007	09.11.2007	16.11.2007	23.11.2007	30.11.2007	14.12.2007	28.12.2007	04.01.2008	23.01.2008
Subject	**Point**	**Line**	**Shape- Direction**	**Size-Spacing**	**Texture**	**Movement**	**Color**	**Contrast-Harmony-Repetition**	**Hierarchy**	**Sovereignty** **Assignment of final work**	**Unity-Balance**	**Submission of Final work**

Table 1. Basic Design and Plastic Arts Course Plan for 2007-2008

This final application which we evaluate in this study embodies a consolidation of the entire lecturing and application process throughout the semester which necessitates using all the acquired skills. Such a project was interpreted as a step towards the comprehension of space. Students were requested to use the basic design elements and principles they have learned. One month before the submission of the final work, the students were given the following problem and all the necessary explanations were made:

*"Imagine a cube given that it is a living cube with the dimesions 3*3*3 cm. Build a life scenario for this cube and design a sphere with a diameter of 25 cm for this cube to realise its activities."*

In order to achieve a systematic evaluation of the work a "sphere shell" was given to the students. The students were requested to use the identical "sphere shell" for their own designs. When these designs were realised the students were requested to build a scenario for their cube and make their designs accordingly.

The final works produced as solutions to the design problem and the related scenarios are evaluated in the matrices designed (Tables 2, 3, 4 and 5). In these matrices the evaluation criteria (basic design elements and basic design principles) are given in the columns while the final products and evaluation scales are given in the rows. We aimed at using these matrices for evaluating to what extent the course contents were used while the designs were constructed.

NO:	SCENARIO	MODEL (FINAL DESIGN)	EVALUATION CRITERIA / TCP	THE ELEMENTS OF BASIC DESIGN										THE PRINCIPLES OF BASIC DESIGN					
				POINT	LINE	SHAPE	DIRECTION	SIZE	SPACING	TEXTURE	MOVEMENT	LIGHT AND SHADOW	COLOR	CONTRAST	HARMONY	REPETITION	HIERARCHY	DOMINANCE	BALANCE	UNITY
1	THE SPHERE DESIGNED HAS THE NECESSARY QUALITIES TO ANSWER ALL THE NEEDS OF THE USER CUBE. THE SPACE IN WHICH THE CUBE WILL BE LIVING AND THE FURNITURE WERE CLASSIFIED AS FOR COLORS. THE SPACE WHERE THE CUBE SLEEPS WAS MADE UP OF MOBILE SPACE PARTS.		U							●							●			
			A	●	●	●		●	●		●	●	●	●		●		●	●	
			S				●								●					●
			TCP	2	2	2	3	2	2	1	2	2	2	2	3	2	1	2	2	3
2	THE CUBE IS FED THROUGH A DIFFERENT PIPES LOCATED ON THE SPHERE'S WALL. IT IS SLEEPING BETWEEN TWO GREEN PILLOWS ON ONE SIDE. IT IS GLIDING ON THE PLATFORM ON ANOTHER SIDE. IT IS PLAYING. IT RESTS IN THE EMPTY SPACE IN THE MIDDLE OF THE SPHERE. THE SPIRALS ON ANOTHER SIDE ARE USED FOR HAVING A SHOWER. THE SCRAMBLED PART IS THE EAST. IT TURNS, PLAYS AND HAS FUN.		U								●	●		●			●			
			A	●											●			●		
			S			●	●	●	●		●		●			●	●		●	●
			TCP	2	3	3	3	3	2	2	3	1	3	2	3	3	2	3	3	3
3	IN MY SPHERE, WHICH HAS COLD AND HOT PARTS, MY CUBE GOES INTO ITS HOME THROUGH THE FRAGILE ENTRANCE THAT HAS A HARD SURFACE. USING BARS AND PLATFORMS I CREATED PLACES FOR INTERNAL ACTIVITIES SUCH AS SITTING, RESTING AND SLEEPING.		U	●			●		●	●						●	●		●		●
			A		●	●		●			●	●	●			●			●	
			S																	
			TCP	1	2	2	1	2	1	1	2	2	2	1	1	2	1	1	2	1
4	FIRST, A FLAT FLOOR WAS CREATED BELOW THE SPHERE AND THEN PARTS FOR LIVING, SLEEPING AND EATING WERE BUILT. THE PARTS FOR EXCRETION AND CLEANING WERE LOCATED AWAY FROM THE MAIN SPACE. THROUGH THE LIVING SPACE'S HOLES THE CUBE IS ABLE TO COMMUNICATE WITH EXTERNAL SPACE. ALL THE NECESSARY FURNITURE AND TOOLS FOR THE CUBE ARE SUPPLIED INSIDE THE SPHERE.		U	●							●	●	●					●			
			A			●		●		●				●	●		●		●	●
			S				●		●											
			TCP	1	2	3	2	3	2	1	1	1	2	2	2	2	1	2	2	2
5	THE CUBE PREFERS A LONELY AND QUIET LIFE INSIDE THE SPHERE. THAT'S WHY IT DOES NOT LIKE VISITORS AT ALL. THE CUBE FLIES EVERYWHERE AND ENTERS ITS HOME FLYING TOO. THE CLEANING AND RESTING PLACES WERE DESIGNED TO BE IN THE LOWER PART. IT WATCHES THE EXTERNAL SPACE THROUGH HOLES. IT LOVES COLORFUL SPACES AND FURNITURE.		U				●				●							●	●		
			A	●	●			●	●			●		●	●	●			●	●
			S			●	●			●	●		●					●		
			TCP	2	2	1	2	2	2	1	2	1	2	2	2	2	1	1	2	2
6	THE SPHERE THAT ANSWERS DIFFERENT NEEDS OF MY CUBE WITH DIFFERENT COLORS IS MULTI-COLORED AS A SPACE. IN FACT THESE COLORS ARE DERIVED FROM MY CUBE. THE HOLES FOR INTER-SPACE TRANSFER WERE DESIGNED TO BE LARGE ENOUGH FOR MY CUBE TO PASS THROUGH. MY CUBE EXPRESSES ITS FEELINGS WITH DIFFERENT COLORS. SO THE SPACE TAKES THE SAME COLOR AS THE CUBE WHEN ITS FEELINGS CHANGE.		U																		
			A	●	●		●			●		●		●		●	●	●		
			S			●		●	●		●		●		●				●	●
			TCP	2	2	3	2	3	3	2	3	2	3	2	3	2	2	3	2	3
7	THE FLYING CUBE FIRST REACHES THE SPACE FOR CLEANING WHEN IT ARRIVES AT ITS SPHERE. THEN IT GOES TO THE RESTING SPACE TO GET RID OF THE STRESS OF THE DAY. HE EATS IN THE RESTING SPACE. THAT WAS DESIGNED FOR EATING AS WELL. HAPPY AFTER EATING WELL, MY CUBE STARTS THE MUSIC WITH A VOICE COMMAND AND DANCES. WHEN IT IS TIRED IT FLIES UP TO ITS BED AND SLEEPS.		U	●							●	●	●					●	●		
			A				●	●	●					●	●				●	●
			S		●	●				●						●				
			TCP	1	3	3	2	2	2	3	1	1	1	2	2	2	3	1	1	2	2
8	AS IT IS A VERY ENERGETIC BEING AND DOES NOT LIKE TOO MANY FURNITURE MY CUBE HANGS EVERYTHING IT USES ON THE WALLS. HE DIVIDED HIS SPHERE INTO SITTING, RESTING, AND PLAYING GROUNDS. MY CUBE WHO LOVES DANCING HAS A MECHANISM IN THE MIDDLE FOR TURNING UPSIDE DOWN BECAUSE IT LOVES TO DO SO. IN SHORT MY CUBE LOVES ITS SPHERE WHICH IS ITS HOUSE.		U																●		
			A	●	●	●		●		●	●	●	●	●	●	●		●	●	●
			S				●		●								●			
			TCP	2	2	1	2	1	1	2	2	1	2	2	2	2	1	2	2	2
9	THE SPHERE DESIGNED IS ABLE TO CORRESPOND TO ALL THE NEEDS OF THE USING CUBE. THE LIVING SPACE AND FURNITURE HAVE BEEN CLASSIFIED IN LINE WITH THEIR COLOURS. THE SPACE WHERE THE CUBE SLEEPS IS MOVABLE.		U	●						●	●						●	●			
			A			●	●							●						
			S					●	●		●	●	●			●			●	●
			TCP	1	2	2	3	3	1	1	3	3	3	1	1	3	1	1	3	3
10	MY CUBE LOVES HAVING FUN AND DANCING THE MOST. IT CAN MOVE ON ALL ITS SIDES AND LIKES GLIDING VERY MUCH. MY CUBE LIKES USING THE SITTING, EATING, AND SLEEPING SPACES DURING DIFFERENT TIMES OF THE DAY. ITS FRIENDS VISIT OFTEN. MY CUBE ENJOYS WATCHING OUTSIDE FROM THE HOLE ON THE SPHERE WHICH MOVES IN THE OUTER SPACE.		U	●								●	●		●					●	●
			A				●	●	●	●						●	●			
			S		●						●		●		●			●		
			TCP	1	3	2	2	2	2	2	1	1	3	1	3	2	2	1	1	1
11	MY CUBE LIKES WANDERING FREELY. IT FLIES. WHEN IT RUNS OUT OF ENERGY, IT GLIDES TO ITS BED AND RECHARGES.		U																	
			A	●	●		●	●		●	●	●			●	●	●	●	●	●
			S											●						
			TCP	2	2	1	1	2	2	1	1	1	2	2	2	2	2	2	2	2
12	MY CUBE IS SIMILAR TO HANWANG. IT IS A ROMANTIC CUBE THAT MOVES IN LINE WITH ITS FEELINGS. IT LIVES A LIFE IN TRANQUILITY WITH ITS BED, ARMCHAIR, CARPET, AND POUFFE. SOMETIMES IT SITS ON ITS ARMCHAIR BY THE WINDOW AND WAITS FOR A BEAUTIFUL CUBE WHICH COULD ADD COLOUR TO ITS LONESOME LIFE.		U	●	●	●	●	●		●	●	●	●	●	●	●		●	●	●	●
			A						●							●					
			S																		
			TCP	1	1	1	1	2	1	1	1	1	1	1	2	1	1	1	1	1
13	EVERYTHING THE CUBE NEEDS EXISTS IN THE SPHERE I HAVE DESIGNED. I HAVE CREATED VARIOUS SPACES IN THE SPHERE WHICH I HAVE DIVIDED INTO STORIES. I HAVE SPARED SPACES WHERE MY CUBE WOULD SUPPLY ITS NEEDS AND SPEND TIME WITH OTHER CUBES. I HAVE FASHIONED EASE OF MOVEMENT FOR MY CUBE THROUGH PASSAGES BETWEEN SPACES.		U	●						●			●					●			
			A		●		●				●	●			●			●	●	●
			S			●		●	●				●	●		●	●			
			TCP	1	3	2	3	3	1	2	2	1	2	3	3	2	1	2	2	2
14	MY CUBE MOVES THROUGH GLIDING AND GOES HOME. THAT IS ITS SPHERE, VIA ITS PLATFORM. AS I THINK MY CUBE IS A NORMAL, HUMANBEING I ALLOCATED COMPARTMENTS SUCH AS LIVING ROOM, KITCHEN, BATHROOM AND WC. ON THE LEFT OF THE ENTRANCE ARE THE KITCHEN AND THE DINING ROOM. TO COMPARTMENT IS RIGHT IN THE MIDDLE OF THE SPHERE THERE IS A STUDY ROOM ON THE UPPER FLOOR.		U										●	●			●	●			●
			A	●	●				●		●			●				●	●	
			S			●	●	●		●					●					
			TCP	2	2	3	3	3	2	1	2	1	1	3	2	2	1	1	2	2

ABBREVIATIONS: SUCCESSFULL(S), AVERAGE(A), UNSUCCESSFUL(U), THE CUMULATIVE POINTS(TCP)
*THE POINTS ARE S: 3, A: 2 AND U: 1 IN THE EVALUATION SCALE **17<TCP<28.3, UNSUCCESSFUL ,28.3<TCP<39.6 AVERAGE, 39.6<TCP<51 SUCCESSFUL

TABLE 2. EVULATION MATRICES.

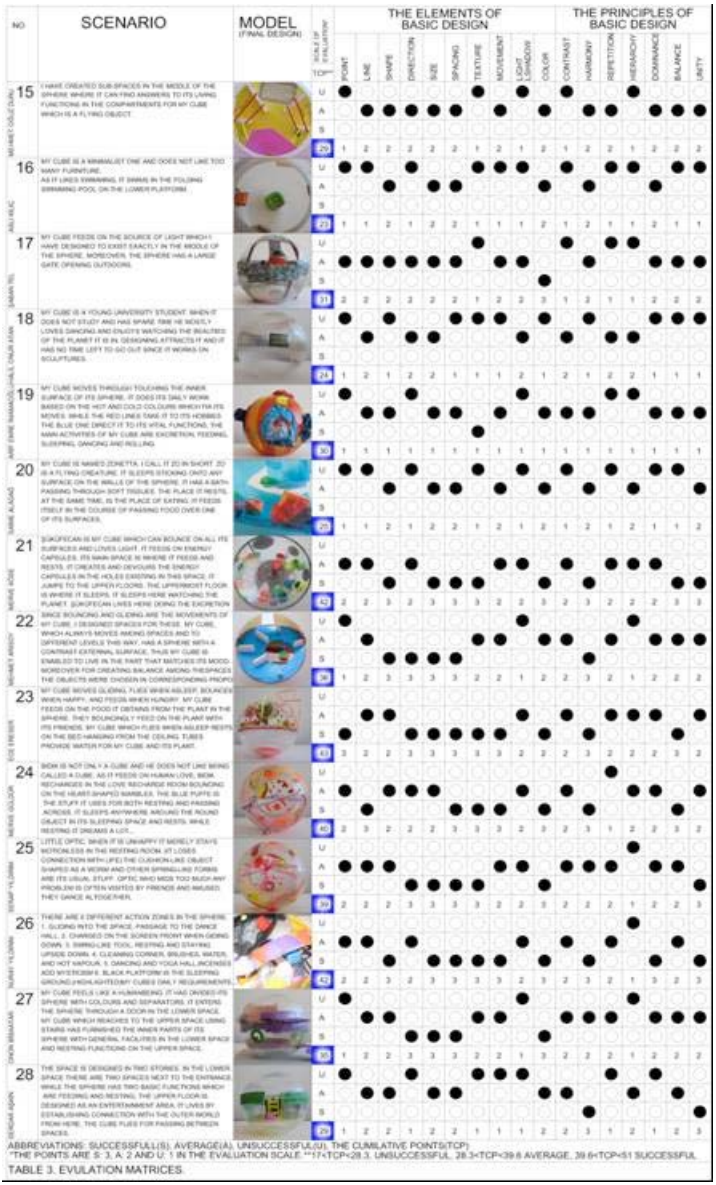

TABLE 3. EVULATION MATRICES.

NO	SCENARIO	MODEL (FINAL DESIGN)	SCALE OF EVALUATION*	THE ELEMENTS OF BASIC DESIGN										THE PRINCIPLES OF BASIC DESIGN						
			TCP**	POINT	LINE	SHAPE	DIRECTION	SIZE	SPACING	TEXTURE	MOVEMENT	LIGHT LSHADOW	COLOR	CONTRAST	HARMONY	REPETITION	HIERARCHY	DOMINANCE	BALANCE	UNITY
29	DUKUFE IS MY CUBE. I HAVE DESIGNED A NEW SPACE FOR MY CUBE WHICH LIVES IN ETILER, ISTANBUL. I HAVE MADE A SPHERE-SHAPED DUBLEX SPACE. ON THE GROUND FLOOR ARE THE UNITS FOR MUSIC, DANCING AND ENTERTAINMENT ALONG WITH THE GUEST ROOMS. THE FIRST FLOOR HAS ITS BED, DIRECTION CHANGERS AND FREE WANDERING SPACES.		U	●					●			●				●	●			
			A		●	●	●	●		●	●		●	●	●			●	●	●
			S																	
			29	1	2	2	2	2	1	2	2	1	2	2	2	1	1	2	2	2
30	OZMO IS TWO YEARS OLD. IT LOST ITS PARENTS IN A GRAVE METEOR CRASH ONLY TWO MONTHS AFTER ITS BIRTH AND WAS LEFT ALONE. IT LIVES IN THE SPACE BASE IT INHERITED. YOU ENTER ITS HOUSE THROUGH A VAST OPENING. IT WATCHES THE UNIVERSE ON THE DIGITAL SCREEN THAT IS ALSO USED FOR COMMUNICATION. EXCRETION IS POSSIBLE THROUGH THE CAPSULE THAT CLIMBS DOWN. THE BED IS FORMED BY THE BEAMS.		U							●						●	●			
			A	●	●		●		●		●	●		●						
			S			●		●					●		●			●	●	●
			38	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	MY CUBE IS NOTHING DIFFERENT THAN HUMAN WITH ITS KITCHEN, ROOM, STAIRCASE, BEDROOM, BATHROOM, WC AND WASHBASIN. THE ENTRANCE IS AS COLOURFUL AS ITSELF.		U	●							●	●		●						
			A		●	●	●	●	●	●			●			●	●		●	●
			S												●			●		
			32	1	2	2	2	2	2	2	1	1	2	1	3	2	2	3	2	2
32	MY CUBE CLIMBS THE STAIRS AND GLIDES TO ITS LIVING SPACE. WHEN HAPPY IT BOUNCES ON THE SOFT PLATFORM. IT USES THE SAME PLACE FOR SLEEPING AS WELL. THE GREEN PLATFORM FEEDS IT WHEN IT IS HUNGRY. IT DELIGHTS ITSELF ON THE BLUE GROUND WHEN IT IS GLOOMY.		U	●	●	●				●	●	●				●	●		●	●
			A				●	●	●				●	●	●			●		
			S																	
			24	1	1	1	2	2	2	1	1	1	2	2	2	1	1	2	1	1
33	1. THE LIFE OF THE CUBE IS LIMITED. IT DOES NOT NEED FURNITURE DURING ITS SHORT LIFE. 2. THE CUBE IS FOND OF ENTERTAINMENT. AS THE WHITE REGION CARRIES ALL THE COLOURS, IT IS SPECIAL FOR THE CUBE. 3. THE MOVEMENTS OF THE CUBE ARE NOT LIMITED. IT GLIDES ON THE HYDRAULIC SYSTEM FOR EASE OF MOTION. 4. ALL THE SIX FACES OF THE CUBE ARE SENSITIVE. IT WORKS ON THE RED AND DEPOSITS ENERGY ON THE GREEN.		U									●					●			
			A	●	●	●				●	●			●	●	●		●	●	●
			S				●	●	●				●							
			38	2	2	2	3	3	3	2	2	1	3	2	2	2	1	2	2	2
34	DEFNE, A JOURNALIST, LIVES ALONE IN A SPHERE IN ITALY. SHE IS USUALLY OUT. USUALLY FOLLOWS THE ENTIRE PRESS ON THE BIG SCREEN. SHE USUALLY HAS A GUEST. HER SPHERE HOUSE IS SO WELL-LIT AND DEFNE WATCHES OUTSIDE FROM HERE. HER GREAT BED IS THE PLACE TO END THE DAY.		U					●	●	●	●	●		●		●	●	●	●	
			A	●	●	●	●						●		●					●
			S																	
			24	2	2	2	2	1	1	1	1	1	2	1	2	1	1	1	1	2
35	X IS AN ORDINARY HARD-WORKING CUBE WHICH DOES ALL AT HOME. WAKING UP IN THE MORNING IT GENERALLY PASSES TO THE BATHROOM NEXT TO ITS BED. TO GET DRESSED IT GOES TO THE CLOTHING PART LOCATED IN ITS ORBIT. THE TRIANGULAR WINDOW IS THE PLACE TO WATCH OUTSIDE HE STUDIES SITTING HERE.		U	●		●		●	●	●	●	●		●		●	●	●		●
			A		●		●						●		●				●	
			S																	
			22	1	2	1	2	1	1	1	1	1	2	1	2	1	1	1	2	1
36	MY CUBE IS A DIE. IF THE DIE ROLLS 6 IT SLEEPS UPSTAIRS ON THE GREEN BED; IF 5 IT SPENDS TIME IN THE WET SPACE; IF 4 IT GOES DOWNSTAIRS, EATS AND GETS READY; IF THREE IT STUDIES; IF 2 IT GOES OUT; IF 1 IT RESTS OR LISTENS TO MUSIC AND DANCES.		U	●							●	●			●	●	●			
			A		●	●		●	●	●			●	●				●	●	●
			S				●													
			29	1	2	2	1	2	2	2	1	1	2	2	1	1	1	2	2	2
37	MY CUBE WHO RESIDES AT SPHERE APARTMENTS NUMBER 6 IS A PHILOSOPHY STUDENT AND ENJOYS BEING WITH ITS FRIENDS SINCE IT HAS A FRIENDLY NATURE. IT DOES NOT HAVE BATHROOM AND WASHBASIN SPACES IN ITS APARTMENT SINCE THEY ARE SHARED. IT DOES NOT HAVE FURNITURE AT ALL. HOWEVER, MY CUBE ADDS COLOUR TO THE ENVIRONMENT WITH ITS COLOURFUL NATURE.		U	●	●	●				●	●	●			●	●	●		●	
			A				●	●	●				●	●				●		●
			S																	
			24	1	1	1	2	2	2	1	1	1	2	2	1	1	1	2	1	2
38	MY CUBE IS A STUDENT OF ARCHITECTURE. ITS HOUSE HAS A VERY MODERN DESIGN. THE PIPES INSIDE, INTERESTING BED DESIGN AND STAIRCASE CONSTITUTE THE UNIQUE DETAILS OF THE HOUSE.		U			●					●						●			
			A	●			●	●	●	●		●		●	●	●		●	●	
			S		●								●							●
			34	1	3	1	2	2	2	2	1	2	3	2	2	2	1	2	2	3
39	THE NEEDS SATISFIED BY MY CUBE WHEN IT ENTERS THE PLACE IT LIVES ARE SLEEPING, EATING-DRINKING AND SITTING-RESTING. AFTER SITTING-RESTING EQUIPMENTS HAVE BEEN PLACED TUBES FOR EATING WERE INSTALLED. PLATFORMS ARE USED FOR THE GLIDING CUBE TO MOVE. SLEEPING FACILITIES AND DANCE HALL ARE DESIGNED AS THE OTHER SPACES OF THE SPHERE HOUSE.		U	●					●			●				●	●			
			A		●	●	●	●		●	●		●	●	●			●	●	●
			S																	
			29	1	2	2	2	2	1	2	2	1	2	2	2	1	1	2	2	2
40	MY CUBE IS A LONELY CREATURE LIVING IN ITS SPHERE. IT CAN BOTH GLIDE AND FLY. KUP KOPOGLU LIVES ALONE BUT IT ALWAYS HAS VISITORS. IT HAS A COLORFUL LIFE. IT SWIMS IN LIQUID ON GREEN FLOOR BESIDE SPENDS TIME ON OTHER PLATFORMS INSIDE THE SPHERE.		U	●	●					●		●					●			
			A			●	●	●	●		●		●	●	●	●		●	●	●
			S																	
			29	1	1	2	2	2	2	1	2	1	2	2	2	2	1	2	2	2
41	BECAUSE OF ITS ANGLED STRUCTURE PITIR PREFERS CIRCULAR FORMS THAT ARE THE OPPOSITE. IT MOVES HOPPING AND CANNOT WALK OR GLIDE. IT HAS SPRINGS THAT BRING IT ANYWHERE IT WANTS. WHEN IT IS SLEEPY IT GOES TO THE BED OVER ROUND PUFFES AND RESTS THERE. WHEN IT IS BORED IT DANCES AND HOPS ON THE PIPES. IN SHORT PITIR LOVES ITS SPHERE THAT IS A WORLD FOR IT.		U									●								
			A	●	●		●			●	●			●	●	●	●		●	●
			S			●		●	●				●					●		
			38	2	2	3	2	3	3	2	2	1	3	2	2	2	2	3	2	2
42	TEMEL LIVES BY THE BLACK SEA IN A FOREST. HE GOES HUNTING IN THE FOREST. THE GROUND FLOOR IS THE BEDROOM. HE GOES UP THE STAIRS. AFTER FINISHING HIS WORK IN THE BATHROOM HE GOES UPSTAIRS AND LEAVES HOME AFTER DECIDING ON HIS DAILY PROGRAM. HIS LIFE IS THE SAME EVERYDAY.		U	●	●	●				●			●	●			●		●	
			A				●		●			●				●		●		●
			S					●			●				●					
			29	1	1	1	2	3	2	1	3	2	1	1	3	2	1	2	1	2

ABBREVIATIONS: SUCCESSFULL(S), AVERAGE(A), UNSUCCESSFUL(U), THE CUMLATIVE POINTS(TCP)
*THE POINTS ARE S: 3, A: 2 AND U: 1 IN THE EVALUATION SCALE. **17<TCP<28.3, UNSUCCESSFUL, 28.3<TCP<39.6 AVERAGE, 39.6<TCP<51 SUCCESSFUL

TABLE 4. EVULATION MATRICES.

NO	SCENARIO	MODEL (FINAL DESIGN)	SCALE OF EVALUATION	THE ELEMENTS OF BASIC DESIGN										THE PRINCIPLES OF BASIC DESIGN						
				POINT	LINE	SHAPE	DIRECTION	SIZE	SPACING	TEXTURE	MOVEMENT	LIGHT (SHADOW)	COLOR	CONTRAST	HARMONY	REPETITION	HIERARCHY	DOMINANCE	BALANCE	UNITY
43	LILI IS A HAIRDRESSER AND HAS A LOVELY CHARACTER. WHEN SHE ARRIVES HOME, SHE RESTS ON THE SPRING IN THE ENTRANCE. HER RED STUFF IS INDESPENSIBLE FOR HER. HERE IN THIS CLOSED UNIT SHE EATS AND GOING UP TO THE FLOWER LIKE SECTION SHE REACHES HER BED. LILI IS FOND OF ACCESSORIES FOR HERSELF AND FOR HER HOME.		U	●		●						●										
			A	●			●		●	●	●	●		●		●			●	●	●	●
			S																			
			TOP	2	1	2	1	2	2	2	2	1	2	1	2	1	2	2	2	2
44	MY CUBE LIVES ON ONLY ONE MEAL, WITH ITS COLOR, ORANGE. IT IS JOYOUS. THE COLORFUL CIRCLES ON THE WALL REFLECT THE LIGHT. IT DANCES, GLIDES, HOPS. HAS A BATH IN SHOWER POND. NIGHTMARE IT REACHES THE FOOD CAPSULES. IT RELEASES THE FOOD CAPSULES. IT CATCHES THEM ONE BY ONE. HOPPING ON THE TRAMPOLINE IT GOES INTO ITS COTTON BED AND TAKES A SOUND SLEEP.		U									●					●	●				
			A	●	●			●			●	●				●	●			●	●	●
			S			●			●	●				●								
			TOP	2	2	1	2	2	3	3	2	2	1	1	2	2	2	1	1	2	2	2
45	MY CUBE ENTERS THE TOP SPACE OF THE SPHERE THROUGH AN ORANGE DOOR. IT HAS FUN THERE, AS IT HOPS. THE PYRAMID SHAPED MUSIC BOX STARTS WORKING. GLIDING ON THE SPIRAL SLIDE HE PASSES TO THE SPACE DOWNSTAIRS. IT SHEDS AS IT CRASHES A WALL. IT GOES UP WHEN IT IS TIME TO SLEEP. WHEN IT HITS THE SOFT BED IT STOPS. IT IS FED WITH THE FOOD COMING THROUGH THE PIPE.		U																			
			A	●						●		●		●	●		●			●	●
			S		●	●	●	●	●		●		●			●		●	●			
			TOP	2	3	3	3	3	3	1	3	2	3	2	2	1	2	1	2	2	2	2
46	IN THE MORNING PIRITA IS HUNGRY AND ANGRY WHEN HE WAKES UP. NORMALLY IT MOVES GLOOMY BUT WHEN HE IS ANGRY HE HOPS. HE PLAYS GAMES IN ITS PLAYROOM SHAPED AS A MAZE. IT USES THE EXCRETION AND CLEANING PART DESIGNED IN THE SHAPE OF A TUNNEL. HE GOES TO WORK IN THE EVENINGS. HE IS THE BOSS OF THE "RIGHT ANGLED TV". HE HAS A SHOW NAMED "OUR LIFE IS A CORNER". HE HAD HIS HOUSE BUILT AS A SP		U																			
			A	●	●		●						●		●			●		●	●	●
			S			●		●	●	●	●	●		●		●			●			
			TOP	2	2	1	2	1	1	1	1	2	2	2	2	1	2	2	1	2	2	2
47	DAILY LIFE IN ITS SPHERE. USUALLY IT REACHES WHAT IT NEEDS GOING THROUGH THE SPACES. MY CUBE IS UNABLE TO MAKE DISTINCT COLORS. THAT'S WHY IT FEELS BETTER WITH WHITE.		U																			
			A	●					●					●		●	●			●	●	
			S		●	●	●	●		●	●	●	●		●			●				
			TOP	2	3	3	3	3	3	2	3	3	3	2	2	2	2	3	2	2		
48	I WANTED TO DESIGN A LARGE SPACE FOR THE CUBE TO MOVE FREELY INSIDE THE SPHERE. I USED PLATFORMS FOR SPATIAL PARTS. I PUT THEM TOGETHER WITH VARIOUS BARS AND SIMILAR ELEMENTS. AT THIS POINT I PUT MYSELF IN PLACE OF THE CUBE AND TRIED TO DESIGN THE SPACES AND PASSAGES AMONG THEM CONVENIENTLY.		U	●									●					●	●				
			A		●			●			●	●		●	●	●				●	●	●
			S			●	●		●	●												
			TOP	1	2	3	2	2	3	3	2	2	1	2	2	2	1	1	2	2	2	
49	THE CUBE LIKES REALIZING ALL THE ACTIVITIES AND DAILY NEEDS INSIDE THE SPACE. MY CUBE USED TO BE A STAR AND IT IS EXPERIENCING THE PAIN OF BEING FORGOTTEN ALONE IN ITS SPHERE. EACH SPACE WAS DESIGNED TO BE FUNNY AND COLORFUL WITH MEMORIES OF ITS LIFE IN THE PAST IN ORDER TO HELP IT TO BE NOSTALGIC FROM TIME TO TIME.		U	●							●	●	●					●	●				
			A		●			●	●	●				●	●				●	●	●	●
			S			●																
			TOP	1	2	3	2	2	2	1	1	1	2	2	2	1	1	2	2	2		
50	MY CUBE USED TO BE A VERY RICH LIVING THING A LONG TIME AGO. HE WENT BANKRUPT AND WAS LEFT PENNILESS. HE FINALLY MOVED INTO THIS THREE-ROOM SPHERE. NOWADAYS HE WORKS FOR A LIVING AND DREAMS ABOUT GETTING RICH AGAIN. WHEN HE GETS RICH, THE FIRST THING HE WOULD DO WILL BE REDECORATING THE SPHERE AS HE WISHES.		U	●				●			●		●					●	●				
			A			●	●		●	●		●		●	●				●	●	●	●
			S										●									
			TOP	1	2	2	1	2	2	1	3	1	3	2	2	1	1	2	2	2		
51	EREN IS THE NAME OF MY CUBE. HE IS A CIVIL ENGINEER. HE WORKS A LOT. HE CAN ONLY GET RID OF STRESS WHEN HE GETS HOME. HE DOES NOT LIKE THE DARK. HE DOES NOT LIKE LOW CEILINGS, EITHER. HE DESIGNED HIS HOUSE HIMSELF. HE DID NOT HAVE TIME TO DEAL WITH INSIDE THE HOUSE YET.		U	●							●		●					●	●				
			A		●		●		●			●		●	●				●	●	●	●
			S			●		●		●	●		●			●						
			TOP	1	2	2	1	2	2	1	2	1	3	2	2	1	1	2	2	2		
52	THE SPATIAL VOLUME DESIGNED AS A SPHERE AND IN LINE WITH THE NEEDS OF THE CUBE. THE SECOND FLOOR IS DESIGNED FOR SLEEPING, THE SECOND FLOOR IS FOR RESTING AND DANCING, AND THE GROUND FLOOR IS FOR LISTENING TO MUSIC AND PERCEIVING THE CUBE. USES ELEVATOR AND GAPS TO GO UPSTAIRS AND DOWNSTAIRS WHILE USING PLATFORMS FOR HORIZONTAL MOVEMENT.		U	●	●	●							●	●				●	●				
			A				●		●	●	●				●				●	●	●	●
			S					●					●									
			TOP	1	1	1	2	1	1	1	2	2	1	1	2	1	1	2	2	2		
53	THE CUBE IS ABLE TO MOVE IN MAGNETIC FIELDS. THE RED-ORANGE-BLUE PATHS ARE MAGNETIC FIELD LINES. AT THE END OF EACH LINE THERE ARE PLACES FOR SURVIVAL NEEDS. FEEDING IS REALIZED WITH A POND. BECAUSE SLEEPING NECESSITATES ASCENSION LIMITED AREAS ARE INCLUDED. EXCRETION IS BUILDING. CLEANING IS INDOORS. THE WIRES ENABLE DANCING AND SPORTS.		U	●				●			●	●	●					●	●	●			
			A			●	●		●	●				●	●							
			S										●								●	●
			TOP	1	2	2	1	2	2	1	1	1	3	2	2	2	1	1	1	3	3	
54	IN FACT THE CUBE IS A LIVING INSECT. ITS NEED FOR SPACE IS LIMITED. CLEANING CAN TAKE PLACE ANYWHERE. BUT FOR EXCRETION THERE IS A CERTAIN PLACE. ALL PARTS ARE CONVENIENT FOR IT TO PLAY, SIT AND REST. THE SPHERE IS ALWAYS OPEN TO THE OUTSIDE WORLD. IT'S A PLEASURE FOR IT TO WATCH OUTSIDE.		U			●					●							●	●				
			A	●	●		●		●		●			●		●			●	●	●	●
			S					●					●									
			TOP	2	2	1	2	3	2	2	1	2	3	2	2	1	1	2	2	2		
55	MY CUBE LIVES IN A UNI-SPACE SPHERE WHERE IT CAN SATISFY ALL ITS NEEDS. BECAUSE THE SPACE IS ITS OWN NO SEPARATIONS OR BORDERS WERE USED. LEAVING A GENERAL GAP ON THE FLOOR THE CUBE WAS SET FREE.		U	●			●	●			●							●	●				
			A		●				●			●	●		●				●	●	●	●
			S																			
			TOP	1	2	1	1	2	1	1	2	2	1	1	2	1	1	1	2	2		
56	MY CUBE IS A FUNCTIONALIST BEING WHO LOVES USING EACH AND EVERY PART OF THE SPHERE. IT HAS A MECHANISM THAT MAKES IT POSSIBLE TO SWING RIGHT ROUND. AT THE SAME TIME THE STICK TURNS ALSO, WHICH HELPS IT TO REACH EVERY PART OF THE SPHERE.		U	●	●	●				●	●				●		●	●	●				
			A				●	●	●			●			●					●	●	●
			S																			
			TOP	1	1	1	2	2	2	1	1	2	2	1	2	1	1	1	2	2		

ABBREVIATIONS: SUCCESSFULL(S), AVERAGE(A), UNSUCCESSFUL(U), THE CUMILATIVE POINTS(TOP)
*THE POINTS ARE S: 3, A: 2 AND U: 1 IN THE EVALUATION SCALE. **17<TOP<28.3, UNSUCCESSFUL, 28.3<TOP<39.6 AVERAGE, 39.6<TOP<51 SUCCESSFUL

TABLE 5. EVULATION MATRICES.

Each criterion in these matrices was evaluated using the scale; Successful (3 P), Fair / Average (2 P) and Unsuccessful / Fail (1 P). The cumulative points (TCP) were calculated via the addition of the points acquired from each criterion. In this evaluation statistical techniques were used and triple Lickert type scale was used for grading. According to the cumulative points (TCP) the following grading scheme occurred: 17≤ TCP ≤28,3 unsuccessful, 28,3< TCP ≤39,6 fair or average, 39,6< TCP ≤51 successful.

The success of the products was determined with reference to the points they received from this evaluation for each criterion. The average points is *31,73(average)*. The lowest point belongs to the product **12** (*19P*), while the highest point belongs to the products **2** and **47** (*44P*). Thus, % 14 of the students were graded successful, % 66 average and % 20 unsuccessful. Moreover the final products were graded with reference to the grading of cumulative points (Table 6).

TCP	GRADE	TCP	GRADE
17≤ TCP ≤21.25	50-54	34.00< TCP ≤38.25	70-74
21.25< TCP ≤25.50	55-59	38.25< TCP ≤42.50	75-79
25.50< TCP ≤29.75	60-64	42.50< TCP ≤46.75	80-84
29.75< TCP ≤34.00	65-69	46.75< TCP ≤51.00	85-100

Table 6. Evaluation Grades.

According to the cumulative (TCP) points received by the students from basic design elements the following values were obtained; 10≤ TCP≤16,7 unsuccessful, 16,7<TCP≤23,4 average or fair, 23,4<TCP ≤30 successful. The average cumulative points received from basic design elements is *19,01(average*). Hence, % 18 of the students were graded successful, 52 % average and % 30 unsuccessful with reference to basic design elements. In view of basic design elements the lowest point belongs to the product **12** (*11P*) while the highest point belongs to the product **47** (*28P*).

According to the average (AP) points received by the students from basic design elements the following values were obtained; 1≤ AP ≤1,67 unsuccessful, 1,67<AP≤2,34 average or fair, 2,34<AP≤3 successful. The most successful basic design elements is *size (2,34 AP)*while the most unsuccessful is *light-shadow(1,41 AP)*.

According to the cumulative (TCP) points received by the students from basic design principles the following values were obtained; 7≤ TCP≤11.7 unsuccessful, 11.7<TCP≤ 16.4 average or fair, 16.4< TCP≤ 21 successful. The average cumulative points received from basic design principles is *12,71(average*). Thus, % 5 of the students were graded successful, % 68 average and % 27 unsuccessful with reference to basic design principles. In view of basic design principles the lowest point belongs to the product 1**2** (*8P*) while the highest point belongs to the product **2** (*19P*).

According to the average (AP) points received by the students from basic design principles the following values were obtained; 1≤AP≤1,67 unsuccessful, 1,67<AP≤2,34 average or fair, 2,34<AP≤3 successful. The most successful basic design principle is *harmony (2,20 AP)*while the most unsuccessful is *hierarchy(1,30 AP)*.

When basic design elements *(1,90AP)* and principles *(1,82AP)* were compared it was observed that the students were more successful in the first section.

Furthermore, it was agreed that the scenarios existing in the matrices are useful for showing the integrity of thought and how abstract ideas are verbally expressed. It ws observed that the products which had good scenarios were also good designs.

Result and Conclusion

Basic design education is a fundamental step for institutions offering design education. In this step the main goal is revealing or developing the skills of the students. In this view the applications carried out by the students gain importance. The application carried out within the scope of our study might be considered as an important transitory step towards spatial design. The designs made by the students using the scenarios they have built demonstrate the unity and maturity in the transition from mental to applied processes. The design problem initially created a negative effect on the students. This condition was overcome with the instructions and studio sharing. The students were asked to comment on their final product and the process through an interview while submitting their final work and these data were assessed within this study. During the interviews the students expressed that they found it entertaining to make a design using such an object and enjoyed the final product. This process of design problem solving has been an important step in letting the students know that designing is an exciting and enjoyable process. However, it is obvious that it would be more motivating for the students if such activities were also made 3 or 4 times during the semester since they can put what they learned into scenarios and design education could be monitored during the process.

References

Atalayer,F., (1983), *Temel Tasar*, S.Ü.Müh.Mim.Fak. Ders Notu, Konya, Türkiye.
Çınar,K.,(1999),*Temel Tasar*,S.Ü.Müh.Mim.Fak.Ders Notu, Konya, Türkiye.
Divanlıoğlu,D.,(1997), *Tasar'ın Öğe ve İlkeleri:Temel Tasar*, Birsen Yayınevi, İstanbul, Türkiye.
Güngör,İ.H., (1972), *Temel Tasar*, Çeltüt Kol.Şti.,İstanbul, Türkiye.
Gürer, L., (1990), *Temel Tasarım*, İTÜ Mat., İstanbul, Türkiye.
Itten, S., (1970), Mein Workus Am Bauhaus,(akt.Gürer, L., Temel Dizaynda Görsel Algı), İTÜ Mat., İstanbul, Türkiye.
Hodgen,L.F.,(1965),*Basic Design*,TeksasÜ.Mim.Ok., Teksas, USA.

Is computer something 'dangerous' for students in a first step of architectural education?

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ABSTRACT

Reflecting on the range of possibilities of the so-called Area of Knowledge of Graphic expression in the Schools of architecture is an urgent and, in many senses, complex task. And it must deal, above all, with the new role of **information technology** (IT). A start must be made by acknowledging the impressive advances it has made in recent years and its widespread incorporation into the work of the architect. Its systems of producing and processing information have revolutionized the scene. And neither can its role in the global position of the profession be exaggerated, faced as it is with the impact of profound transformations. This new situation constitutes a complex challenge for the study of architecture and the teaching of drawing in particular. However, it also offers an unrivalled range of **opportunities**, not only because of the bracing and indeed cathartic effect of having to come up with convincing answers for important questions but also because of the enormous possibilities of the new media.

The history of the profession is moving through a period of **profound change** and this is obviously reflected in a thousand different ways in the conceiving of the objectives and methods of teaching. In this context the question of the role of computers cannot be avoided and may indeed constitute a way of placing them in perspective. Indeed this is a frequent issue of debate in the profession. However, the discussion is often as passionate and vibrant as it is fragile, superficial and fractured due to the speed of developments and their capacity to confound us. It is, therefore, necessary to attempt to systematize the questions raised by placing them in some kind of logical order and that is the purpose of this piece. Nevertheless, we have no intention here other than to sketch out a possible list of **questions** with the intention of contributing material for reflection, identifying its range while avoiding excess in both caution and enthusiasm. In our efforts here we will have no hesitation in resorting to the commonplace, on the contrary. In any case no attempt will be made to impose a doctrine or defend a controversial position; if that is what seems to be happening – perhaps it what's to be expected – then at least it will have been worth the effort to recognize it. At the end of the day questions are usually as important as answers and may often anticipate their content.

Perhaps the formulation of some of these questions will sound a little naive but it's a risk worth running if they are as urgent and unavoidable as they appear to be. This may well be a reflection of the exceptionally precarious nature of a teaching and intellectual space which sees history mercilessly trampling it underfoot and perhaps recognition of this situation wouldn't be a bad starting point.

Obviously the right questions might be these or they might be others. And maybe some might be missing. However, it's the **panorama** which they lay out that is important. Here they come…
Is computer something 'dangerous' for students in a first step of architectural education?

Some deep questions on informatics and the methods and character of the schools of architecture

Abstract
Reflecting on the range of possibilities of the so-called Area of Knowledge of Graphic expression in the Schools of architecture is an urgent and, in many senses, complex task. And it must deal, above all, with the new role of **information technology** (IT). A start must be made by acknowledging the impressive advances it has made in recent years and its widespread incorporation into the work of the architect. Its systems of producing and processing information have revolutionized the scene. And neither can its role in the global position of the profession be exaggerated, faced as it is with the impact of profound transformations. This new situation constitutes a complex challenge for the study of architecture and the teaching of drawing in particular. However, it also offers an unrivalled range of **opportunities**, not only because of the bracing and indeed cathartic effect of having to come up with convincing answers for important questions but also because of the enormous possibilities of the new media.
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1. Should drawing be pronounced dead?
The new technological resources available have caused architecture to evolve in such a way as to develop new necessities in the area of graphic expression[1]. Also, they tend to substitute for the traditional vehicles for creative project work and all that is related to the transmission of information in it. The use of IT in drawing has conquered virtually all the space reserved in our world for graphic tasks. Not only have they consigned to history something as intimately linked to the traditional structure of the profession and teaching itself as drawing with ink, they have reduced the use of the pencil to unimaginable levels thus giving force to voices that proclaim and perhaps celebrate the death of drawing or, at any rate, the obligation or necessity to draw.
In a certain sense this death of drawing is an accomplished fact on the ground. Only a handful of nostalgics continue to use the pencil in the profession's main studios. The general adoption of IT for the creation of graphic documents pushes to the extreme a polarization which confronts, with ever greater radicality, the "working" graphic document, provisional and expendable, with every possible drawing that is aware of its own virtuality, self-satisfied and narcissistic, an end in itself and destined, one way or another, to be contemplated.
When manual drawing was an obligation then it was possible to entertain oneself with it. There existed the possibility of using it both for its instrumental value and at the same time use it as an autonomous exercise. It existed as an art redundant in terms of the production of specific results and more connected to exclusive spaces of virtuosity and sophistication. All of this is, however, becoming more difficult as the space for sketching becomes more reduced for reasons of comfort or simply of time.
Perhaps we should miss the slow delight with which a project matured on the drawing board - drawn with care, even if the result was not always

[1] LUXAN GARCIA DE DIEGO, M. DE, *La cultura tecnológica: transformaciones del soporte gráfica, nuevas tecnologías, nuevos materiales, nuevas formas de expresión,* in YA.VV., Actas del V Congreso internacional de Expresión Gráfica Arquitectónica, Las Palmas de Gran Canana 1994. pp. 149-162.

exquisite – in which one might expect to find a certain early confirmation of the expectations aroused by the labor of design, especially for internal consumption. Perhaps we have to resign ourselves to forgetting the collections of sketches which used to be stored in architects studios as a collateral, but not unimportant result of the production process. Perhaps we might rightly long for the times when the architecture that meant something was a drawn architecture, as occurred at certain specific periods of history, including certain phases of what is called “postmodernism”. Perhaps we may come to detest the merely transitive and untidy nature of many graphic documents generated by the new IT resources. As we know very well, obtaining quality images with them is a challenge that requires a previously unknown level of effort and dedication and involves external collaborations with many elements beyond our control. Perhaps it will be difficult for us to recognize that this sort of graphic document has its inevitable degree of projectedness given its level of cold impersonality and abstraction. Still, there’s no point whining about any of this, the course of change continues unchecked and imposes its rules on us.

Manual drawing seems destined to survive above all as a mechanism for the correction of printed originals in the framework of the peculiar process of iterations which leads to the final results of a design. Its instrumental nature will be confirmed by the evidently transitory nature of the graphic developments generated in the course of its development.

Nevertheless, it might be worthwhile to spare a thought for the those who persist with traditional drawing in so far as it associated with the defense of a space reserved for the hand and pencil in the initial phases of projects.

2. Should the role of freehand drawing in the development of ideas be defended?

The effectiveness of IT in the final phases of the design project is obvious. The computer offers enormous advantages when it comes to storing and processing information and is particularly useful when it comes to the making and storing of variations as well as the subsequent introduction of modifications into plans. One can recognize this however we can still see that IT has its limitations in the earlier stages of projects when much depends on intuition and feeling one’s way.

In professional circles it’s not uncommon to hear that it’s only worth the effort to moving to the computer in order to make the best use of one’s time and effort and in order to avoid being led astray by the inevitable rigidity of its routines, once the design is well defined and well defined means drawn.

The new media would appear to save on ink but not on pencil. The availability and approachability of IT does not seem able to replace the graphic techniques that it is supposed to supersede nor avoid the corresponding need to learn them. Nor does it seem able to answer all the

requirements of the work process; while computers are able to do an enormous amount related to the accumulation, transport, manipulation and storage of information, their advantages are not so clear in the first stages of the development of ideas.
In an architectural project the first steps in the creative process are difficult to codify in objective terms. They require a medium of expression that is at once flexible, versatile and controllable. Such a medium also has to have an important degree of ambiguity, indefinition and gradableness. This level of ambiguity will correlate to the degree of indefinition of the design in each of its successive stages of development and play an important role as an activator and catalyser of the imaginative discourse of the author. Indeed it is the author who projects on the medium, just like in perceptive, analytical and graphic processes, the organizing and rational schemes which make up his mental framework as a constructor and developer of a project.

3. Should we learn to get on together with the mouse as well as with the pencil?
It's necessary to ask if we can find in the computer a vehicle as personal, versatile, malleable and docile as the pencil. We cannot answer that the computer is too complex and "perfect" to react with sufficient rapidity to the movements of the imagination nor that it does not seem to have the capacity to enter into a dialogue with it. The language of IT seems particularly suitable for the transmission of limited and concrete messages but not so suitable for receiving or releasing images in movement, as part of a process of continuous transformation and still less for simple evocations or suggestion.
The role of the computer is, therefore, not very clear in the initial stages of design when the sketch prevails. The computer competes badly with feeling one's way by hand into a design and this technique's natural suitability for the tentative finding of solutions, to give minimum and provisional form to figurative ideas while they are still very vague and to allow them to feed off each other in successive reiterations related to intentions and programs or to quickly compare alternatives of a global character.
In any case it may not be appropriate to discard the possibility of finding in the mouse a graphic tool as capable as the pencil of tuning in to what has sometimes come to be known as our "graphic thought". The gradual familiarization of the user with the language of the screen might lead to the creation of something real that, out of a combination of surprise and inertia we find difficult to imagine (or still refuse to accept)

4. Does the "new IT tool" facilitate the work of architects?
Not only do computers allow us to work with a high degree of precision, at a scale of 1/1 or even more, they *oblige* us to do so and that's exactly the

point. The use of IT demands extra effort with regard to the definition of the project and the rigor of the documentation. It's this fact that makes it impractical to use computers for the execution of representation while the project is not yet sufficiently well defined. These representations are constructed line by line with each supported by the others in such a way as to require a very precise kind of decision making relating to the measure and location of each one while taking account of their concatenation and strong degree of interdependence.

Furthermore, it has been held that infographics incorporates the ideational process in its final stages, if not indeed after they have been developed. And significantly that that so-called graphic animation is betrayed by its own name, one thing is a drawing or graphic effort employed to "illustrate" or "animate" a project *a posteriori* and quite another that involved in its creation. Nevertheless, our experience of how things have developed leads us to soften this perception and moderate the force of its exposition. It's no longer necessary to go on about it insofar as graphic animation merges into the process of the project with growing naturalness in its initial stages, taking on a driving role without problems.

In any case, the inadequacy of the idea that more technical means always results in greater comfort and more possibilities in the development process is clear. Indeed a greater variety of technical means may well result in more demands being place on their users. Clients are fully aware of the range of possibilities offered by new tools and constantly adjust their expectations and demands to them. The very existence of new technical means virtually obliges to make use of them. And this progress amounts to a kind of forward moving train which we can only get off if we give up the desire to reach our destination.

5. Do computers condition the design?

It may be too early to be sure the extent to which the computer constitutes a new tool which simply increases the efficiency with which we carry out graphic operations, while still following the equivalent traditional procedures or whether it constitutes a new way of dealing with the problems of design and makes its users call on new mental and operational resources[2].

[2] REGOT, J.M., y MESA, A. de, *Geometrie Descriptive & Solid Modeling. El control gráfico de los objetos en el espacio tridimensional* in AA.VV., *Actas del V Congreso de Expresión Gráfica Arquitectónica,* Las Palmas de Gran Canaria 1994, pp.245-255. See also *La Geometría Descriptiva. El cambio instrumental*, in AA.VV., *Dibujo y Arquitectura, Investigación Aplicada. Actas del IV Congreso Internacional de Expresión Gráfica Arquitectónica,* Valladolid 1992, pp. 153-156; MONEDERO ISORNA, J.*, Implicaciones conceptuales de las técnicas informáticas*, in AA.VV., *Actas del V Congreso Internacional de Expresión Gráfica Arquitectónica,* Las Palmas de Gran Canaria 1994, pp. 524-546.

In this context we ought to ask ourselves about the role of the computer as a medium in design and the influence it has on the results produced. We also ought to think about to what extent the proverbial rigidity of the routines of the computer influence creative operations and whether they do so well or badly.
It seems reasonable to suppose that IT doesn't condition the design and the computer as a medium, doesn't leave any residue, in the sense that it doesn't leave specific traces. Also, this question ought to be thought of in terms of a comparison with the possibilities offered by manual drawing. Specifically, computers are particularly good at developing all sorts of composite schemes and systems that rely on the repetition of elements and every kind of related test and experiment. It can thus be presumed that the computer tends to restrict the freshness and agility of the early phases of ideation, traditionally regarded as informal and carried out by hand, resulting in a certain depersonalization and standardization in the design. However, I don't think that there is enough evidence to back this up. It would be truer to say that IT provides us with an enormous capacity to respond to our necessities. This becomes obvious the more we become familiar with it. If this is indeed the case then it's plain to see that the use of IT vastly expands our range of possibilities and allows us to do things that would be impossible using the routines and under the conditioning of manual drawing.

6. Has IT allowed the appearance of new languages in the world of architecture?
It's obvious that computers have allowed the development of a whole series of new languages in the area of forms in architecture, like those associated with the idea of so-called "deconstruction". To these must be credited the spectacular developments experienced recently by a range of neo-organicist alternatives.
As is well known, what is involved are options associated with a variety of sources of inspiration in which the protagonists are combinations of soft forms and curved surfaces, quite often of extraordinary complexity. For obvious reasons it already has become the norm to have resort to IT tools to manage them that originate in other fields, particularly aeronautics.
Graphic manipulations facilitated by IT languages have also permitted the growth of a range of imaginative possibilities such as those associated with pixelations and complex compositions with random structures.

7. What are the limits of our ability to anticipate the results of a design?
People are now accustomed to seeing films, often of extraordinary sophistication, entirely composed of virtual simulations and also almost believe that they can expect to see finished, animated prefigurations of similar quality as part of our daily work in the field of architecture. These

expectations fail to take into account the enormous budgets, complex equipment and incredible amount of work that they involve. The growth of such expectations has also resulted in the loss of the habit of making the imaginative effort required to interpret sketches or plans.
It can therefore be seen that one our major problems as architects is the limited nature of our capacity for graphic anticipation. Quite often and paradoxically, the growing abundance of media available for the representation of projects doesn't help us but in fact works against us because with more capacity to graphically represent things come higher levels of expectation about the definition offered in these very representations, especially at the stage of the project known as the "preproject". This brings two problems with it. In the first place, there isn't usually a logical and proportional relationship between immediate objectives and the abundance of means available to realize them, or, to put it another way, the effort made towards a graphic approximation made in the initial phases of a project is often inadequate and mistaken. And, in second place, much more than the reasonable or logical may be expected of each stage of the design process to the extent of breaching the limits of our profession in search of solutions which, even their own specialized fields, can only be reached after a long and difficult work process carried out on the firmest of bases.

8. What reactions are produced by virtual images of projects?
We must surely admit that rendered images arouse in those contemplating them feelings of fascination, stupor and distrust.
There is also the problem of interpreting the perspective images; what is involved is always a series of approximations which don't attempt anything other than to contribute to the intuiting of results which they only offer a poor anticipation of. They have to be interpreted with a certain spatial vision and in the framework of a study of the of the project plans. And these images don't aspire to offer a vision of the final result; instead they try to assist the imagination of the observer to intuit some of its most important aspects.
For example, one of the most common abstractions in these representations is that related to the materials used. They can only offer the palest evocation of the textures and effects of the components that will be used in the final version of the building. In many cases, when these kinds of images are prepared the decision about the exact materials to be used and exactly how they are going to be used still have not been made and all that can be done is offer tentative suggestions. It ought to be taken into account as well that that the preparation of these images is a laborious task and it's not easy to modify them in step with the changes being made to the design.
Perhaps the conclusion that might be reached is that rendered images tend to insinuate an almost unlimited anticipatory potential and this fact might

explain some of the suspicion they produce. This suspicion can't entirely be explained by the capacity of the images to play tricks by way of the deliberate selection of the "views", exaggeration, distortion of the angles of observation, the manipulation of scale and false perspective effects. It also has to do with the peculiar combination of its, hypothetically enormous, capacity for approximation and a capacity for partiality that is as great if not larger as well as being unavoidable.

9. Does infographics constitute a real type with the possibility of several specializations?

Some experiences arising from the resorting to IT may be worth mentioning at the outset. In the first place the difference between graphic recreations resulting from three-dimensional renderings and those obtained from the treatment of images after their creation, of the type facilitated by Photoshop, must be underlined.

The difference may be attributable to the contrast between production and post-production. In that case both procedures would appear to be complementary.

But there are other cases in which the recourse to Photoshop is an alternative and they represent the production phase itself. They are based on the direct formation of perspective images through the emulation of photocomposition techniques and collage, perhaps based on visions of the state of the object of design previous to the architectonic, urbanist or territorial intervention to which it was subject.

Perhaps one of the conclusions that can be drawn from this tour of the options available is recognition of the special relevance and visual effectiveness the conventional model. The application of rendering techniques to three-dimensional models has a number of special virtues, notably its capacity for insinuation and the evidence of its imaginary condition. It tries to be anticipatory only in abstract terms and is expressly "non realist". Its results have the virtue of keeping away from pretensions of verisimilitude appropriate for visual recreation which tend, even without wanting to, to lean towards the fidelity of photographic vision.

10. What place is there for computers in teaching?

All of these reflections have served as preparation for what is probably the star question relating to the place of computers in the teaching of architecture.

CAD, that indispensable professional instrument, demands a special place in the framework of technical teaching and even the global reordering of graphic training which it offers. This, not only for the new possibilities it offers in relation to drawing but also the comprehension of the geometry of shapes it offers, allows for the finding of options distinct from or complementary to those available by traditional means.

Without a doubt this fact "emphasizes the appropriateness and necessity of conceptualizing the formative processes and at the same time weakens the exactness of manual drawing" even if in the coexistence of the manual and the computerized "the first provides the concepts while the second provides the visualizations and drawings."[3] It must therefore be concluded that each mode of expression has its own role and that that hand drawing continues to remain necessary and useful.

We can't still consider ourselves victims of the fascination, to some degree paralyzing, which the arrival of IT on the scene provoked. It's now possible to glimpse a plausible approximation of its usefulness in relation both to professional work and the teaching of graphic expression. IT-based methods represent an indispensable working tool and students should be introduced to them at as early a stage as possible in their study of architecture. Nevertheless their importance does not invalidate the usefulness of the traditional teaching of drawing imparted at the beginning of the course.

We are, to some extent "the last descendents of Vitruvio, Leonardo da Vinci and Alberti". It could be that, in practice, that "primitive" instrument which is the pencil is destined to be forgotten and without a doubt "the graphic medium has its days numbered in the form in which we know it now."[4] It might also be the case that the wave will wash us away entirely and that under the seductive power of the unlimited possibilities of IT, it will become difficult to sustain the weight currently given to hand drawing in architecture courses. But at the same time it would important to be aware of and argue with conviction that this doesn't invalidate the teaching efficiency of drawing which derives from its specific projectedness.

The widespread availability of IT-based media may indeed constitute an argument in itself for voluntarily doing without it in the early stages of training and limiting teaching to drawing with the pencil; it's easier to manage, more approachable and it's easier to do corrections and modifications. In any case none of this should be in detriment to the exactitude and rigor appropriate to representation in architecture. Perhaps the solution might lie in focusing on the ends desired and leaving the selection of the means to be employed to the students while maintaining the demand for exactitude and rigor regardless of the means employed to achieve them.

The conclusions drawn from the reflective introspection developed in recent years in the graphic subjects of architectural studies substantially coincide with those that that can be drawn, for the methodology of those same subjects, from analyzing the consequences of the historical evolution of architecture arising from the experience of the modern and based on their

[3] SÁNCHEZ GALLEGO, J. A., *Geometría Descriptiva. Sistemas de proyección cilíndrica*, Edicions UPC, Barcelona 1992, p. 29.

[4] JIMÉNEZ MARTIN, A., *El dibujo en la enseñanza de la arquitectura*, Universidad de Granada 1995, p. 28.

results they also insist on the projectedness of the representation and the decisive role of drawing both in analytic tasks as well as in the project process. These conclusions point to focusing attention on the ends and range of graphic operations, beyond questions arising from their format, media and methods. In this way they would chime with a reflection designed to integrate teaching efforts and so focus on their intentional aspects, without, of course, losing sight of the diversity of their procedures. The claim has not been made in vain that, for example, the computer can be useful in the teaching of geometry to show the student a problem in graphic form, something that due to its operative or spatial complexity would otherwise require a much greater effort. The same holds for the graphic illustration of the same problem from a number of viewpoints.[5]

Computers introduce a defined component of precision and rigor into graphics and so can save a lot of the effort previously required in the graphic subjects related to project processes of the architecture course. However, unnecessary though it may be to say it, machines only respond to the instructions they receive from their users which means those users will have to have good judgment. And in a practical discipline there is no way to develop that judgment other than through personal and unassisted practice. With sufficient effort the student will achieve by herself that which later she will be able to achieve much more rapidly with the new electronic media.

It's clear, therefore, that architecture students should be taught to use the pencil and express themselves with it too.

There is no option but to conclude that the exercise of our profession is founded on drawing and design and that there is no reason to think, regardless what twists and turns events might take, that this is going to change. The question, therefore, that has to be asked is what type and quantity of drawing is it necessary to learn in order to be able to acquit oneself with confidence as an architect.

Furthermore, it's already commonplace that architecture students seek a rapid form of teaching in the drawing programs that are common in the professional world. In so doing they perhaps find themselves driven by the insistence on a much more practical form of teaching – an insistence prominent in the sociological and institutional elements of the profession – as well as polluted by haste to a achieve a rapid reward for their efforts and seduced by the indifference displayed by discoverers of the new towards traditional practices in subjects in this area. Neither is there any shortage of teachers sensitive to this demand and indeed enthusiastic proponents of it. This being the case it would perhaps be wise to exercise prudence

[5] CANIVELL RODRIGUEZ, J., *La Geometría Descriptiva y el segundo ciclo. Técnica de representación de la Arquitectura mediante ordenador* in AA.VV., *Actas del III Congreso de Expresión Gráfica Arquitectónica»,* Valencia 1990.

compatible both with avoiding the total sanctification of existing methods and practices and the over rapid embrace of the seductive novelties.
Quite obviously, these student demands appeal for judicious limitation of the time and effort dedicated to an eminently instrumental technique, especially if they seem to be in detriment of the acquisition of fundamental skills, knowledge and judgment. Echoes still persist of the confrontation between the defenders of drawing by hand and vindicate its value in the early stage of the development of ideas and their detractors, either indifferent or enraged; it might be wise to exercise caution with the latter in so far as they are emphatic promoters of that which the former regard as risky adventures in which command of an instrument, even if an exceptionally useful instrument, counts for more than maturity in the comprehension of the subject it is to be used for.
The debate is necessary and pressing and has probably only just started. There is much in play and while we have to avoid haste the changes which we are experiencing don't permit delay either.

A WALK THROUGH THE FIELDS

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ABSTRACT

There are contexts where it is possible to create an immediate contact with the different forms of design, that better help to understand this side of the project and at the same time to provide the analysis of the contemporary. For these reasons we have taken in examination these border fields. We will undertake a path between the visual and performing arts and architecture from the particular point of view of emphasizing the strong interdisciplinary character of design, in spite of their functional diversity, while addressing the dimension of problem solving regarding the proposed questions. Design, as it arranges a complex of expressed facts, might then be in an area appearing freer from residual problems because actually it's capable of provoking unusual experimental plot. We'll also see how the extent of these interrelations constitute the vast panorama.

Keywords:
Contexts, immediate contact, border area, interdisciplinary, experimental intrigues.

A WALK THROUGH THE FIELDS

Introduction:
this document deals with the tacit questions in the syncretistic tendency which aims to put in the curriculum different interdisciplinary aspects, often transmitting also dyscrasias that not obvious evaluations hide.
I'll try to analyze if students could find a real link between University reality and the deep changes that the new ways of contact with these questions are causing into the world. Is it possible to teach without transmitting unconscious prejudices? Which kind of approach is possible?

Paper:
A didactic path is often an experience. The contexts here discussed are interconnected because they can be useful as a process through which this approach theory attempts to a more immediate participation. An educational method, which tries to convey elaborate conceptions not only logic, evasive, through a direct involvement, both to the fields they belong to, together with their methods, and to the psychological point of view of the environment-beneficiary feedback. The educational path here discussed is a phenomenological design itself, related to the experience of staying "inside" the project. Consequences and technologic problems occurred during the stage of my testing ideas, have begun guidelines to the students involvement in the workshops. Testing experiments faced with important conceptual questions. They try to take consciousness of the "today" questions in experimental terms: still not questions, but possible "problems" of the future. The last one is a fundamental aspect to people who are devoted to design, architecture and art. People who shouldn't have a paradigmatic education, but researchers capable to open new horizons such as the scientist, the artist, the philosopher. University should educate intellectual people not only how to find a problem solving as the traditional educational paradigm, but who leads the students to face fundamental questions which are often left out because not considered so important on the educational point of view. As we know it's contradictory to involve a first year student with the syllabus. In the last years the cultural scene of design, and education of our society is deeply changed, becoming extremely dynamic and varied. Study syllabus are strict and vague: It not only can't envisage the many social cultural students background with their different way of learning, but it isn't able to consider changes of our times. Besides, the world of technology and design has yet reached young people much time before the educational world has done. Introducing a new educational means. It is also important to ask itself how, what in which we believe is

really important. Therefore it's fundamental to make an attentive analysis of the present. All we pass on should be still a lasting value to people whom is addressed. Thinking that is much better sitting down the w.c. now than before is absurd, and if we realize that throughout the centuries its ergonomy is never changed ,is really a big conceit. As a consequence, if I ask myself this question, I have necessarily to address to science or science fiction. Therefore I have to go out of the common coordinates problem-method-solution.

The new generations find a world completely different as to the previous one. In this sense, teaching methodology has to realize these changes.

It's necessary to observe that the birth of the modern concept of design comes into a time of a wider production and greatest industrial consumer growth . Therefore the need, of analysing such problems in order to be solved, makes us to realize the state of the world related to its questions and needs. The basis of the need idea, have first of all to consider that the student doesn't have neither that world nor those needs that a method proposes whereas the new generation of students press for consumption as never before in the history of mankind, the world they find is living a heavy crisis caused by the decreasing, by the ageing, by the overproduction and by climate change. Modern young people haven't the power to face these problems like the previous generations. Informative media evolution together with the using of new materials, has brought the rise of a new kind of metamorphic objects. The function of these sensible objects, made often the coming of other new functions rather than the "requirement" of new solutions. Architecture may be considered a sort of bridge towards arts where it owns its architecture. These aspects merge ever more. Therefore a teaching programme runs the risk of transmitting a frozen idea of the so said "Architectural truth" or the general idea of the design and the relationship between them….To propose new problems nowadays, means to produce new worlds, the frontiers of the possible, much better those of the impossible, are vanished. The Science-Fiction is in trouble. I propose an approach to design as exercising of the problem without solution, a didactic methodology of the "Why" which remains on the threshold.

Problem problem.

Our society is overpowered with solutions, to invent weak problematic underlines the lack of reasons. Men who lived before gave solutions with acts and objects defined through centuries of accommodation. It is better a good problem than a bad solution, it is better living with a good problem than in a society full of idiot. For this reason we will try to overturn the scientific procedure of the methodological approach. The first thing to do is to ask ourselves what a problem is, rather than trouble ourselves about how to train the students to search a solution around a problem. The economic and industrial post-war development, is over. In those years the Pop Art

movement arose, plastic become the most important material used for every thing. Beyond, Futurism, Dadaism, Bauhaus experiments, design develops its various natures from those origins: The object of common use, the toy, the educational toy, the virtual multiple kinetic with visual researching targets the making of objects through the rational solution of problems through minimum gestures and operations. Our present is living a crisis the effects of which must be contextualized in this project such as one of the implicit elements like gravity or other likely determining in changing nature and project goals. Consumer media appeal has got its climax. While the world is buried by every kind of rubbish, people is pressed to buy needless things, advertising is not more an external moment of this project, integral part of the design which has its goal in the figure of the consumer. Things which are a luxury symbol are seen as easily achievable by all people. Vacuum cleaner with their pseudo philosophic "*ergo sum*" the same with cars and other products. Of course, the "problem solving" has to consider it. Through this idea , new generations of students have found our critique conscience which can teach them to be different consumer of ideas, products, then promoter of a new project sense. What is a need? It should start from here in order to analyse and to comprehend where a real problem is, instead of inventing it. We will make a path nearer to their world. Art, architecture, science, speak the same languages. They express ideas through recognized structures, shared in the context from which they come, but, at the meantime sharing common elements with other context. "Talking" about design we can't forget the several problems of subject analysis from which it comes and whom it addresses. Students we refer to, have this internal world a polarized panorama, of which we will hold when we'll deal with "problems" and "solving". Part of our analysis dealing with definitions such as context, reality, language, problem will have to consider the aspect of technique which has lost the simple value of "material". What that was defined concrete, static, mute, has been transformed in something full of generative contents and new paradigm capable to upside down the traditional methodological praxis. They create a meta project. They function as bridges between contextual areas shared before and difficult to face and give the possibility to new contextual areas to contain new projects. An example from another context is genetic engineering which is technique science devoted to problem solving but at the same time producing new ones. New ideas on corporeity, laws , and technique. In this extremely variegated panorama, there the trend to present technological and scientific works as "Research" cause their implications in the artistic and architectonical contexts even if no concrete ideas are supported. ideological "truth" are put forward.

Si dà spesso per scontato che una comprensione
Chiara e distinta di nuove idee ne preceda, e dovrebbe

Precederne, la formulazione e l'espressione istituzionale. (……)questo non è però il modo in cui si sviluppano i Bambini piccoli. Essi usano parole, le combinano, giocano con esse, finchè giungono ad afferrare un significato che era sfuggito loro. E l'attività iniziale di gioco è un presupposto essenziale dell'atto finale della comprensione. Non c'è alcuna ragione per cui questo meccanismo dovrebbe smettere di funzionare nell'adulto.
(Paul Feyerabend, *Contro il metodo)*

The main point is made up of a severe tendency which addresses itself to science and technique as referring points to the artistic production. Researchers commit the wrong to find inside them a confirmation to their artistic works. This thought is contradictory because it gives the wrong idea of finding the truth in the "irrefutable facts of science." From science it should be useful to take the idea of the constant experimentation towards changing goals. Dealing with our target, we will try to delineate a dialectic dimension. You can put in evidence how the last century was plenty of artistic movements, political and social revolutions, scientific and cultural discoverings the consequences of which are still everlasting. Architects, designers, artists worked at the same project creating movements and programmatic manifestos even if different in sensibility and peculiarities. Polyhedric figures converged in single protagonists without qualification in those fields. It was Lazlo Moholy-Nagy who realized a continuity line among Art, technique, design, and science as visual researcher. New aesthetics are deeply marked by implications which derive from those historical movements. These elements are equivalent and contemporary, subjective and objective at the same time. During the first years of the twentieth century between revolutions and manifestos two distinct tendencies even if apparently very similar appeared: The project is characterized by a rational method, oriented to the improvement of the social and cultural human life conditions., the other tendency discovers synaesthetic qualities of forms and color perceiving, opening to the subjective and intimate nature of the planning stage. The goal of this one being heavy of implications, becomes no limits experimentation, and , often, without realizing hope. It challenges the bourgeois objectification in the profitable predicting at the organic, complex, indefinite application forms of *non euclidean* geometry. These thesis were untimely to the technologies of the time. Recently we have noticed that , after a technological and cultural evolution, they could be reliable paths. In this sense our target is to exploit that moment as peculiar to increase imagination in what is experimental. The action area is what is constricted between the possible and conjecture, the rash and admissible, the objective and the subjective.. The last one is the most affected by the

cultural and technological changes. Then it becomes the real circle of interest and the effective operative possibility for people who are planning. Therefore this is a very important working-out ideas and didactic study moment. Under certain aspects the Twentieth century may be considered a futuristic century. People who recognized themselves under the avant-garde movement, may be defined futurist. *A Town of Three Millions of Inhabitant* by Le Corbusier, is an utopian and rationalist example where the panorama seems to be a futuristic one, where the solution is only the excuse to the problem. For this reason it may be considered a science-fiction work. Many artistic objects rise to provoke, next become real contents for new needs, then new solutions. An example of it is *La Sedia per Visite Brevi* 1945 by Bruno Munari, the use of which was considered "*Impossible"* (The chair was greatly slanted), it was a criticism to more and more frenzied life and an invitation to stay few time in case of no welcome visits. On this basis at the present day we find similar chairs down Paris underground, just the arrival of the next train. Other example is *The Monument at the Third International* by Tatlin, never realized, cause technological, political and economical questions made define it just a fantastic fluttering .
At the present complex and daring asymmetries like those ones, are seen in a different way.
Besides, we know that his Letatlin**,** designed for a study on the human flight through the use of objects which never reached their goal. Probably ,what we love, had something of absurd and incongruous, during its realizing. Each solution is source of a problem .
Another important question is the concept of spatiality, today at the centre of a greatest interest for many different reasons. Often, spatiality is undergone to the passive jargon by the current dictionary: an example to all is the term of "Interactivity"

Gli ambienti non sono contenitori, ma
Processi che mutano totalmente il contenuto
(Marshall McLuan, *Percezioni*)

These vagueness often spread wrongs given by primary not peculiar evaluations. Aspect filled of materiality which will take us to perceptions observations strictly lied to consciousness.
These aspects are fundamental to study, to experiment , to comprehend planning elements having the goal to best comprehend the present theories, changing and concepts regarding the material approach.

Material and Immaterial, Analogical and Digital, Real and Virtual.
We will take in examination photography particularly the digital image because it resumes a series of notion such as appearance, physicality,

objectuality etc . The digital image could be related to the concept of photography during the nineteenth century, however, at the present , the meaning of the term “digital” has produced a metaphorical utmost degree of the concept of spatiality as immaterial, virtual, interactive place, even of digital as final act of the same materiality. Far from a simple shock. Nicholas Negroponte, a master of digital image, in his work *Essere digitali* outlines the difference between atom and bit. In nineteenth century thanks to Einstein and Heisemberg terms such as “physical” and “substance” are deeply changed. Can we still sustain this dichotomy and the following consequences? There is a gap between before and after. That is given by the coming of d*igital era.* There are a whole professional categories shared by the acceptance of the digital or of the analogical. Somebody talks about digital autonomy which could permit the realising of independent world from reality , then in this sense “virtual”. We are in front of ancient concepts such as mimesis and freedom of expression. Here begins our analysis. We could say that digital is analogical, a referring point may be images. Digital method is based on the same principles of physics from which the traditional photograph comes , otherwise it couldn’t be visible. A photograph can live inside a negative film, it can give us informations only if incident light passes through it. On silver salt paper , kept in the dark room, it will not be visible, when we open the window, it appears, the “file” opens. Light gets the surface, the virtual is shown. The same happens when we believe inside the computer something exists, so we talk of “virtual”. We believe we can do it to recall the real ectoplasm potentially , never totally real and outward. This act gets the evocation power, a sort of recalling to life, to thought. It is supposed by a pre-existing the immanence of which is presumed by the relationship between the machine and me. *Analogy* I think that the imagine is inside. You switch on the computer and you see again an open page which makes the light to enter , the same light, the electromagnetic emanation which permits to show the same “all day long reality “ more than its emanation on a paper surface. “Bit” are translated in something of visible by an electromagnetic frequency shareable and shared by all over the world, the physics codex which shows itself sometimes as photon, sometimes as light or sound or yet as substance.

Physics of memory.

The “fixing” aspect on the support, shows its analogy with the past dimension proposing and with the question of memory and duration. Whoever wants to keep an archieves of images and texts, will have wardrobes full of the same file .On the other side, with the coming of “new technology” the informative, changing polisemic aspect of spatiality as place where events are performed (see theatre) and transformed, is emphasised. The direct involvement of the spectator to the Kinetics dimension not more

as a passive observer, comes from the first futurism, where architecture, scenography, toys objects, showed an enjoying dynamical to interaction to entertainment. Through Marcel Duchamp and Man Ray, Dadaism flew into analytic and meditative kinetics, a sort of mentalist which is one of the qualities of the current spaces become sensible, changing and alive.

The Mind.

This study finds its roots in the cybernetic, analysing the relationship between computers and some deep areas of brain and psyche as our extension capability, as horizon of material and virtual meanings.

Mind works gives to itself meaning and asking about new functions. Language, is the virtual aspect of this aspect.

With the growing up of the digital allegory, analogical grows up the same. Is more the analogical which follows the digital or is it the contrary?

New paradigm of relationship: spatiality as happening. A video installation is bright information whose the cinematic content can realise sceneries. Light itself is information, its content may change time, text and object as if it was "virtual". Supposed that light doesn't exist without a material referring on which reflecting, and which the same object is a shape of the same light energy through which it shows itself, interactions between various element of which nature contexts are made up, are implicit.

Furnished with our path the following will offer some research experiences and planning

Moments which have been presented to workshops and which are new approaching hypothesis to first year didactic studies.

a) *Vettori*, (vectors) overview of research on space, time, consciousness, it is a study that conceived and realized a device for retrieval and reproduction in 360°: the movie camera *Sincronottica.* Vettori is perceived as an internal environment proceeding in consecutive instants, advancing as on a vehicle in movement. First conceived for theatre it became an object of elaboration in various workshops for their articulated aspects and the involvement they achieve. The resulting spatial perception is quite stimulating. This path including many different mental technological, conceptual, artistic, and expressive design implications, has been the reference point to a didactic path. The workshop set to the Architecture faculty of Catania centre of Siracusa in 2004 all week long involving first and second year students.

Targets :

To realize an exploration of the spatiality concept on different levels: physical – sensorial, conceptual, technological, and artistic approaching scientific and philosophic questions. We have tried to deal with areas where the didactic path of the design was not intended as something else to be

solved. Expressive field, free from the specific planning interest. With the goal to reach a constructive utility. Space related to our ability of “listening it” as plastic form full of invisible symbols and constant modulations. Moving the problem to the design, that is to say to that project which doesn’t solve anything apparently. That doesn’t change your life, anyway it is heavy of a new quality problem to be solved and rich in further development. Design as experimental challenge which involves many different aspects of thinking, of building, of imaging.

Methods:

a) Moving the attention on the awareness of your own conscience.
b) Realising a meditation on the relationship between internal space and the external one.
c) Exercising in promoting experimentally new problems and technological devices to realise the projects.
d) Exploring and discovering new areas of the design between art, architecture, performing arts.
e) Observing The space-temporal flow.
f) Trying a comparative approach between the human perceiving system and the animal one.
g) Fluid representation of space.

Ways of exercising:

1) Realising plastics through the analytic quality with regards to space-time, distance, and becoming.
2) Three-dimensional computerised representation in animation-evolution
3) 3D Representation considering the six coordinates
4) Images containing real spaces and building , adjustment through the preferential visual.
5) Shooting video /meditation. Identifying a use of device to get a personal time-space and evolution.
6) Involvement in final setting up exhibition to the Civic gallery of Contemporary Art.

Issues:

We observed how high students involvement was through their works out, both as “actors” of an idea and with regard the possibility to find corroboration in their experimentations, where more the question was free, more they were insecure. The participation to a final exhibition was very important: it put in evidence how the involvement of the student is determining because he get out from the traditional didactic contexts, to open to the world at different levels.

b) C.I.C.O. : Composition Individualized in Continuous Operations.

Materials and Methods:

Method favouring the discovery of new forms in existing objects creating composite solutions. Proposed approach analyzing forms and the creation of associations between very different contexts and objects. Ambiguity and continuity between objects on a different scale; a never – ending exercise. The discovery of different formal contents is favoured in the existing object without priority between utility objects, art, architecture and nature.

Improving observation faculty towards the analysis of the existing; on objects, materials, structures, reinforcing the proportional leaps perceiving of scale and context favouring the realizing of an internal path to the planning process regarding the studying and to the analysis of revealed structures .Developing the ability to produce new objects with very different goals and quality, including volumes dimension.

Paths:

a) Observation of structure through the snapping and the photographic framing , the sense of volume, shadow and range.
b) Precise analysis of the object and secrete structure discovering
c) Observation of the possible correspondences in the relationship between two or more objects.
d) New objects and structures with different functions.

Typology of practicing:

1) The student was asked to make a series of photographic snapping, framing a detail of different objects, architecture structures etc.. to realize a sum of these objects which placed on a new one.
2) Through a editing video software, student was asked to realize a result evolution, with fading, transparency, with a consequentiality which reached a visual meaning coherent in equilibrium, form, structure, symmetry and asymmetry volume and, in some cases of function.
3) It was asked to reach a volumetric value of synthesis therefore the evolution of the process gave the advancing sensation of the system till the final result of the summary in all coherent.

Issues:

We have observed the possibility to connect **t**hrough the analytic perceiving of the form, meanings, structures and relationships in a wide way. At the attentive observing of the structures followed a wide range of relationships between sense, content, meaning, hypothesis and discovering approaching at media using.

Conclusions:

We may conclude by stating that the time when one could define an expressive field through a singular technique by means through which it manifested referring to a consolidating tradition, these belong today to regions with ill-defined boarders trespassed almost by necessity beyond the possible dictate from various factors of historic order, technology and esthetic. That which in the past represented an exception has become routine procedure. If it then expoandas from a part, the range of technical interest for theatre, architecture, art, etc.. all in all for design as a system of approach in general, a well extended field of designation is needed, not one limited to a particular area of connoted origin.

The didactic approach, to involve the first year student , should contemplate a series of openings to experimenting contexts, arguments and world of the contemporaneity. This favours the continuity between the didactic and the world of project in its different forms. These contexts and approach favour the goal.

Bibliography:

Feyerabend, Paul, *Contro il Metodo* (1979). Feltrinelli Ed. Milano
Feyerabend, Paul, *Scienza come Arte,* 1 ediz. (1984) Laterza Ed. Bari
Munari, Bruno, *Da cosa nasce cosa* (1981) Laterza Ed. Bari
McLuan, Marshall, *Percezioni*(1998) Armando ed. Roma
Negroponte, Nicholas, *Essere Digitali* Sperling Paperback

AN APPROACH TO COLLECTIVE STUDIES BETWEEN UNIVERSITIES AND A WORKSHOP: "SPACE: FROM ELEMENT TO THE WHOLE"

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ABSTRACT

A workshop called “SPACE: FROM ELEMENT TO THE WHOLE” has been performed with the participation of two instructors from each of ITU, MSGSU and KHAS Universities and six interior architecture students from each university. The objectives that have effected this workshop held in March 2007 are:

- Interior design students and teachers from 3 different universities coming together in a collective study and having the opportunity to get to know each other.
- As a result of the evaluation of their approaches to the subject given and their willingness and susceptibility to work together; introducing the advantage and disadvantages of the different universities’ teaching methods.

MATERIAL AND METHODS

The principal subjects of the workshops are:

- In cubic modules having 3 meters at all sides, combining given concepts with different functions of a house. On the second stage, considering in detail the relationship of the parts with each other regarding the spacial, functional and design principles. And finally reaching from parts to the whole.
- Testing the relationships of the spaces with an experimental approach.
- Providing awareness of the dimensional and formal requirements coming from the function of residential sub units.

This workshop aims to reach to the whole that presents unlimited choices and has no boundries, by using limited, defined spacial parts in different combinations.

At the first phase, working groups were organized from 3 students each coming from different universities. They chose one function and one concept/principle from a pre-defined list. The students were then asked to resolve the functions with abstracted yet scaled elements while reflecting the chosen concept.

The space and concepts that were matched at the end of this selection are:

Bath – Solid/Void
Kitchen – Flexibilty
Bedroom – Fluidity
Kid's Room - Rhythm
Hobby Room – Lightness
Living Rooms – Balance

The first part of the project was concluded by the completion of the design phase. At the second phase of the project, all groups were asked to evaluate the possibilities of combination of the modules designed by themselves with the modules of other groups. During this combination, the functional features of the residential space establishing the transitional locations to reflect the means of living, the relations between reflected concepts and principles were taken into account.

At the end, preparation of the 1/10 models by each group were made and put together as a whole.

CONCLUSION

It was observed that this training model developed the student's approach for the design, positive effect occured during design process, in terms of providing handcraft and design coordination.

To perform the studies that will advance the cooperation between the universities more frequently will provide them not to be isolated from others and to progress their relations with the intended counterparts during training. Concurrently, the students will be able to observe the issues which are gained and left weak by the different training models and will be able to have conscious of their deficiencies and advantages at an early stage.

KEYWORDS

SPACIAL DESIGN, BASIC DESIGN EDUCATION, MODULES, WORKSHOP, CONCEPT

AN APPROACH TO COLLECTIVE STUDIES BETWEEN UNIVERSITIES AND A WORKSHOP: "SPACE: FROM ELEMENT TO THE WHOLE"

It is natural that every educational institution employs a different approach to how to conduct design education. This difference/differentiation is observed between universities in Turkey as well. Traditions that educational institutions have constituted through their experiences in the course of time have reflections on a wide spectrum extending from student admission systems to the related programs to contents of courses within curricula. Consequently, when students enter professional life, they produce designs that have traces of educational formation they acquired.

As academics pertaining to three different universities, therefore three different understandings/approaches organized a workshop in order to observe our students' skills to cooperate within a collective study and communication levels they have with each other. Other objectives we have to hold this workshop are as follows:

- To enable students to meet other students that acquire education based on different approaches,
- To give them opportunity to exchange information with a new academic,
- To enable them to experience a new workshop and spaces,
- To provide students with the opportunity to observe and try to understand those who have different skills compared to those of theirs and are considered as "those on the other side"

In accordance with those objectives, the subject of the workshop was determined to embrace a program that would push students to a collective study and exchange of views. Furthermore, the workshop emphasized the fact that being a designer required the practice of creating innovation, instantaneous and rapid thinking and producing solutions. The subject entitled "Space: From Element to the Whole" was chosen as it included concrete and abstract concepts while the project was being constituted.

Students and academics from Istanbul Technical University (ITU), Kadir Has University (KHAS) and Mimar Sinan University of Fine Arts (MSGSU) participated in this collective workshop. Among these three different universities that offer Interior Architecture programs, Istanbul Technical University that launched its related program in 2002-2003 academic year and graduated its first students of the said program in June 2006 has adopted a holistic approach that gives priority to cooperation between different disciplines in Interior architecture education. The primary objective of the

program is to establish the foundation of interior architecture education through architecture education and afterwards focus on interior space scale. That's why the first three semesters in Interior Architecture curriculum are conducted collectively with Architecture and Landscape Architecture departments. Students from three different disciplines study in a mixed environment in studios and have the opportunity to be in constant interaction with each other.

The Mimar Sinan University of Fine Arts continues its Interior Architecture program for 83 years since 1925 and has become one of the departments that continues to offer education in the Faculty of Architecture. It is one of the universities with a deep rooted tradition and gives emphasis on artistic thinking and expression skills. In its aptitude test held in every year to choose its candidate interior architects, the University focuses on three dimensional thinking, expressing views and attention. Programs, on the other hand, have been developed in a way to train professionals on both design and implementation issues.

KHAS University, as a foundation university, is a new institution established in 1998. With academic support coming from various universities, interior architecture department was established within the faculty of fine arts and chooses its students through aptitude tests.

The subject and the method to conduct this workshop were defined in meeting we held with the participation of two academics from each of the tree universities interested in this project. The priority aims were chosen to be as follows;

- "emphasizing the significance of working with a concept in space design" and "reaching a whole without any borders which offers unlimited choices through use of space elements which have defined borders with different combinations".

The subject of the workshop requires implementation in two parts. First, students were given cubic models each of which had an intersection of 3 meter to study on and asked to place "housing sections" and "different concepts" by combining, which we identified within models. During this process, in order to enable students to understand dimensional and formal needs of housing sub units resulting from function, students were asked to utilize abstracted elements whose real measures were preserved. In the second part of the implementation, it was planned to analyze pieces formed by different student groups giving emphasis on spatial, functional and design related principles and reach an appropriate whole. Different alternatives were expected to come out during this implementation process and it was deemed

appropriate to work on one of the plans chosen among them taking into consideration difficulties related to implementation and exhibition.

In the first meeting, an appropriate environment was prepared to enable students coming from different universities to meet each other. However, on the first day, students failed to establish communication desired. Efforts were joined to create an environment to exchange views presenting general information regarding the objective, aims, causes of the workshop and related expectations. Afterwards, six groups were composed including three students each coming from a different university. These groups first drew lots to determine one among bathroom, kitchen, living space, bedroom, nursery and hobby room. After identifying spaces on which each group would study, drawing lots once more, every group was asked to choose a concept among flexibility, lightness, fluidity, rhythm, fullness/emptiness and balance. The following table came out of lots cast:

Bathroom : Solid / Void
Kitchen : Flexibility
Bedroom : Fluidity
Nursery : Rhythm
Hobby room : Lightness
Living Space : Balance

In the workshop, one academic guided each group and theoretical and visual information related to the concepts chosen was provided to students. In this way, students were acquainted with the concepts. After this support, students started to exchange ideas and make preliminary sketches. Even though this exchange process appeared to be very harmonious from time to time, indeed it continued mostly with difficulties. These difficulties emerged; because identities coming from three different approaches denied “thinking systems” of those on the other side. The necessary balance was mostly established by academics when students were about to reach a solution. In order to accelerate design process, academics each of whom was playing the role of a guide in each group shared their own experiences giving information on relations between space and concept and provided assistance to students in this way.

It was concluded that presentation of ideas related to designs stemming from the process of exchanging views and expression of ideas through putting them on paper were significant issues (creating problems in some groups) very closely related to freehand drawing skill levels. While some students were observed to be very talented on an oral basis in conceptual dimension in producing ideas and furthering and developing design process, some were

able to think and convey their ideas through three dimensional perspectives by free hand drawing which is one of the priorities of the educational system they belong to.

In the preliminary sketch process that lasted for two days, sticking to the necessities of the spaces chosen and the concepts required to be utilized, students agreed on the number of 3x3 meters of modules which would be up to the needs of students, but not exceed 3. At the end of the first two days, all groups were ready to make scale models.

The process being difficult in the thinking stage, continued in a more sharing based understanding in the implementation and presentation preparation stages. On the third day, in model workshop, the preliminary sketches prepared were converted into clear and net drawings of 1/10 scales. Afterwards, all groups were asked to assess the possibilities of combining their own modules with those of other groups. During this combining process, the emphasis was given on functional characteristics of the house, forming transition spaces in a way to create richness to life and relations between spaces as well as those between concepts and principles they reflect. After necessary decisions were taken, every group was asked to move in to study areas spared for themselves to start their models and decide on which materials they will use in which dimensions. According to a joint decision taken, it was considered appropriate that the whole space coming from elements to be constructed, that is the final model of the house be white.

On the one hand, works necessary for models such as cutting, combining and folding continued and on the other hand, scale drawings prepared were detailed, colored and perspectives as well as presentation plates were enriched.

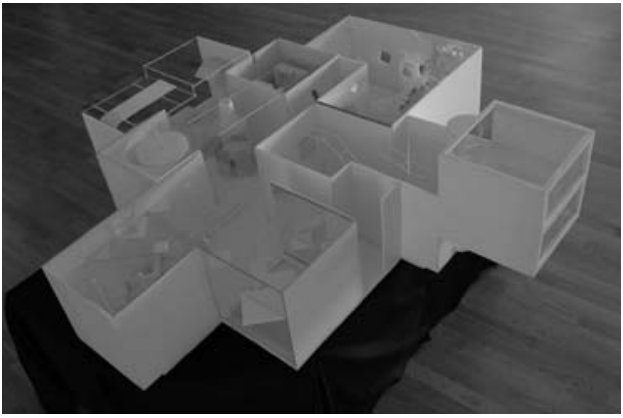

Figure 1. Final white model

When we analyze spatial correspondences of the concepts in the final products that the groups reached, we conclude that the fluidity group created the feeling of continuity in the bedroom making use of cubic modules and that the same group reached a solution in bed, lighting and storing elements through a single module.

Via the concept of lightness, while the image giving the sense of “hang in the air” was created in surfaces in the hobby room, it is understood that both the material factor was used and the design technique involving the disconnection of the related elements from the ground plane created the feeling of flying.

The flexibility concept in the kitchen was achieved through the modularity of the elements and this allowed open plan by setting the space free when out of use.

Regarding the concept of solid/void, the bathroom was abstracted in a way to meet standard functions necessary for a bathroom and as a result solidl and void surfaces were created when considered as graphics complementing each other. The closet areas placed on one side filled spaces spared for wash basin use on the other side. In the system built in the bathroom, when this mass composed of two parts, which can move right and left between two opposite walls is assembled together in the middle, the whole bathroom area can meet bathing function.

The concept of balance used while creating the living space was questioned in both furniture and other elements constituting the inner space and in the relations of cubic modules with each other on the plan and in the third dimension as enabled by the approach of the workshop evolving from element to the whole. It started with search for balance between divisions of this space the design process of which was composed of three modules and the elements as parts of the whole.

At the end of four long working days, the “whole” model and drawing plates were made ready for exhibitions planned to be organized separately at different dates in three universities. An arrangement consistent with the logic of the workshop was sought for the exhibition and as a result, each group was spared a space on a neutral canvas. Each group was asked to present their final products using presentation plates including comments and photographs taken all along the workshop. In this study in which a solution aimed at a real function was not expected, it was expected to yield results such as rapid perception of abstract concepts and interpretation of these concepts with the concept of space, developing methods for attaining an end, reaching a single

solution in a group work, analyzing different views and reaching a solution, coming to terms with those on the opposite side and reaching an end. As mentioned the “absolute consequence” was not expected. Groups had rather different approaches to the concepts, space designs and model making. Therefore, duration of the design and production processes varied according to the group. However, every group succeeded in putting forth the final product in given time.

Figure 2. Brain Storming

In the study conducted, the significance of clarifying concepts before a project in interior space design was underlined. Thus, forming an identity in the space becomes easier and more comprehensible. While transferring abstract concepts considered to the third dimension, negative and positive aspects came out and necessarily the design process was built thinking the concrete correspondents.

At the end of the workshop, we, as academics, grasped the opportunity to make very beneficial assessments;

- At the end of collective studies conducted, we, once more, came to conclude that the educational approach of the institution students pertained to was very effective in design processes students experienced. This could explain distant and defensive attitudes students coming from different educational institutions had towards those from other universities at the beginning of the workshop and softening of the environment after determining working groups and concepts and spaces. At the same time, it was observed that every student’s way of expressing him/herself and technique of putting

her/his ideas on paper changed according to the university he/she belonged to.

- The majority of the students refused to try a different way, having much confidence in their own skills and design methods they used; as a result disagreements and deadlocks came out. This problem is considered not only to stem from characteristics of the participator students but also reflect the general thinking system of the universities. Therefore, in particular universities' warmer approaches to collective studies and the rise in the number of such workshops and sharing atmospheres will be considerably positive.

- It was detected that few of the participator students (one in twelve) behaved in a free way as expected while assuming the responsibility of consequences of the design made and expressing views. This result proves once more lack of freedom and expressing views freely in the education system.

It is accepted that differences in design approaches employed by participators in the workshop will bring together positive expansions. However, it should not be ignored that different understandings and skills "must gather together and establish communication in order to unite in a joint educational approach, understand each other, complete their missing parts and share their experiences.

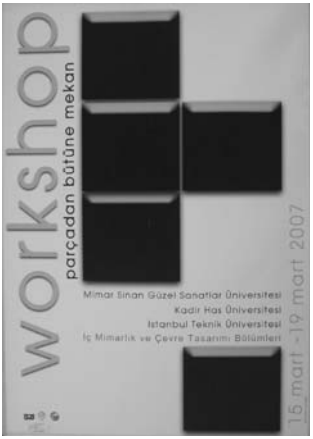

Figure 3. Workshop Poster

THE ESSENCE OF ARCHITECTURE AS A TERRITORIAL ENTITY

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ABSTRACT

Architectural education is quite challenging in the sense of creative design process. What do we teach to become creative? We find appropriate solutions (correct material, correct structure, correct form etc.) for unique design problems. There are several technical lessons being thought in architectural education for this process. Unfortunately they are thought separately and independently. There is a lack of discipline which has to fulfil this necessity: we have to teach the students the essence of architecture as a whole, since we use all these technical lessons together in the creative design process which are indeed interdependent. This lesson shall take place especially in the first year of architectural education.

In architecture nature has been the guide for creative design. Architectural designs are shaped by climate, topography and natural forces. We have observed that building shape and energy use are directly related with each other. There is a significant connection between environmental design and architectural form. As structures and building forms act together they must be considered without neglecting the climate in design process. We have tried to give several major examples to support this idea.

Traditional design grew out of countless experiments and accidental events and the experience of generations of builders who continued to use what worked and rejected what did not. Local architecture is the territorial entity. This study puts forth the concept of implementing the idea of organic architecture in architectural education. Certain key concepts are determined and we have tried to attempt to grasp the importance of blending the organic architecture with modern education design basics.

We have observed that there is no global integrity in the architectural language. Sometimes it is materials, a joint or maybe the forms are the starting points for creative design. There are of course many different ways of implementing creative thinking to design. But materials, structures, local building techniques and forms have more possibilities for designers. Therefore architects shall try to use the materials, structures and environmental selective building forms as a medium for creative thinking in the design process.

Use of material, appropriate structure choice and adapting the building to its environment are studied within this context. With the global and local notions education proposal, the junior students would become more conscious in their nature-oriented designs.

Key Words: *Territorial Entity, Materials, Structures, Environmental Design, Organic Architecture*

"The 'design process' is not just a matter of shaping the appearance of things around us but also of shaping the way we live" [6]. Green, P.

In architectural education there are several technical lessons which teach architectural discipline. These are Materials, Structures, Project Studio, Construction, Design Geometry and Environmental Physics that are being thought individually. In the first year, the architectural student is quite confused about what architecture is. Little emphasis has been placed on the essence of architecture. There is no lesson linking these disciplines. We have observed a necessity of a new lesson which prepares the junior student for the senior years. All these technical lessons could be united as a whole and benefited acting as a foundation of architectural design since we use all these technical lessons together in the creative design process which are indeed interdependent. In order to realise the design education in architecture the link of multi disciplines has to be formed at the beginning. The student acquires an architectural point of view and experiences the meaning of architecture. Otherwise these technical lessons would be indifferent and could not be used in any theoretical basis. Hence, this lesson shall take place especially in the first year of architectural education.

In this context the first year student would adapt to senior lessons faster and he/she would be more conscious. This multi disciplinary interaction ends up with design education; the creative thinking takes place, blends with the context and forms an entity. This introductory lesson has to have items referring the principles of building design in harmony with environment in its curriculum.

Architecture provides us controlled environments. The first aim is to obtain a shelter against the effects of nature with its form, materials and elements. Human beings want to create an ideal environmental condition in which they function best.

The solution of environmental problems in architecture lies beneath the decision of the architect's choice; to design an environment rejecting or environment friendly buildings. The form, the orientation of the site, the nature of the materials used, the nature of components used in harmony with context responds the comfort needs of the users.

"At the beginning of man's existence –when primitive- man was close to nature. Whatever he attempted to achieve was instinctively genuine and in full accord with the laws of nature. Such was continuously the case even

[6] Green, P (1974), Design Education Problem Solving and Visual Experience, BT Batsford Limited, London.

when man had gradually progressed to a higher level of development during the great Civilizations. Man still sensed intuitively the laws of nature, and his form was indigenous and expressive. Thus was the situation as long as man was creative. Later on, when man lost his spiritual communication with nature, he lost also much of that guidance nature could offer" (Saarinen, 1985).

Global Consciousness for Local Architecture

We have observed that in modern architecture there is a lack of local entity. For example a hotel chain uses the same form of architectural design in every country regardless of their culture, climate and topography. Architectural education from the first year till graduation shall impose developments for local architecture. We should obtain a unity of local design disciplines freed from individual acts. We have to extend this motto to global understanding.

We believe that stressing the local architecture principles in first year architectural lessons would improve specialized professionals through environmentally conscious design. In the following years this understanding shall be dispersed to several branched lessons. This approach has the same structure in nature, itself. Nature is a whole but it has local climates and different topography all over the world. This caused distinctive regions.

As Green, the author of Design Education Problem Solving and Visual Experience book, mentioned "Design is a human activity in which everyone is involved; it is a process of identifying problems and needs and establishing critical priorities. It requires research, data collection, organisation of resources and rational analysis and measurement. And as a solution evolves, by rational synthesis or practical trial and error, it takes on a form and has to be tested and evaluated" (Green, 1974). The function of the design doesn't mean just organizing the spaces: we have to adapt our building, envelope, structures and materials to the climate and topography. Visual appearance is an artistic feature but for local architecture this speciality gains a local identity. Hence in the wholeness of architectural studies, the local architecture development brings forth the national identity in architecture. In this context the primary notion in architectural education has to impose especially organic, local blended with contemporary designs.

Vernacular Architecture

"...each building should be of the earth, not perched on it"[7].
F.L.Wright

[7] Lind, C (1998), *The Wright Style*, Thames and Hudson, London, p.114, 115.

Living in harmony with natural environment belongs to ancient times. In the past life with nature was more unified than it is at the present. The guilds of the past knew how to use the conditions of nature efficiently and developed spaces accordingly. In Vernacular architecture the natural forces shape the built environment without restraints of style and fashion. Green quoted that "We need to look in new and critical ways at the changing world and become aware, not only of its visual appearance, but more important, the forces at work behind it which shape the man-made environment" (Green, 1974).
Bruno Zevi has impied that "Young architects have learned from Wright is essential: to interior space as reality, the freedom of plan, and the continuity of rooms, the exterior as a result of the interior arrangements, the projection of the house into the garden, a reliance on nature, the use of warm, natural and frequently of local materials…" (Zevi,1950).
As, a Turkish designer, Kucukerman puts forth this phenomenon, we see a response to climatic conditions in vernacular Turkish Houses like implementing the long over-hanging eaves, and narrow vertical windows. "As for the climate, the rooms in the Turkish house are arranged in harmony with the prevailing weather conditions" (Kucukerman, 1985).
According to Wright, vernacular builder has generated methods instinctively. They seized the problems created by the forces of nature and replied with the correct choice of materials and construction techniques. He was influenced by Turkish vernacular architecture. (Figure 1)

Figure1. Vernacular and Organic Architecture. Wingspread by F.L. Wright and Harran House From Turkey (Sonmez, 2006)

Organic Architecture and Frank Lloyd Wright

"…form and function should be one as it is in nature."[8]

F.L.Wright

Organic architecture is the derivation of vernacular architecture. It is architecture designed to harmonize with its environment and the needs of the people living in it. This is to say that one building designed by an architect using the philosophies of Organic Architecture may be unique when compared to another building designed by another architect in another region.

"Unlike Sullivan, Frank Lloyd Wright, who introduced the term organic into his own architecture in around the 1900s, used this word on new architectural grounds, while its common usage refers to something that has the characteristics of animals or plants. He modified Sullivan's slogan with his motto form and function should be one, using nature as the best tool of inspiration but not of imitation. One of the other features of Sullivan's architecture was his view on ornamentation. Sullivan's ornamentation was based on natural forms, especially plants. This led to a new approach in architecture. Wright was impressed by Sullivan's concept of ornamentation. However, he interpreted this idea in terms of geometric order instead of direct imitation. Thus, he developed this idea, which should be integral to the building itself and helped him adapt an anti-classical and anti-European approach, in his organic architecture" (Sonmez, 2006).

Frank Lloyd Wright developed his idea called *organic architecture* based on the existence of the rules of nature. And he has manifested nine principles of architecture that reflected the development of his organic philosophy. "The principles addressed ideas about the relations of the human scale to the landscape, the use of new materials like glass and steel to achieve more spatial architecture, and the development of a building's architectural character, which was his answer to the notion of style" (Wright, 1939). Wright makes a list of important design principles to be achieved in a project: unity, simplicity, harmony, continuity, plasticity, integrity, order, and tenuity.

Wright was deeply influenced by Japanese Architecture. As he claimed, "Japanese domestic architecture was truly *organic architecture*" (Naden, 1968). He was also deeply influenced by Aztec and Turkish architecture. Both cultures respected the environment of utmost importance. Their architecture is in harmony with nature of their site. "The functional paradigms of nature in architecture as referred to by Wright can be investigated within the context of unity, simplicity, and harmony. These principles became the

[8] Sönmez, F (2006), *Organic Architecture and Frank Lloyd Wright in Turkey within the Framework of House Design*, METU Masters Thesis, Ankara, p.33.

main factors to maintain the forms in nature. The fundamental laws of nature are also taken into consideration in architecture since they became the key to designing of a good building" (Sonmez, 2006). Like Vernacular guilds did Wright attempted to adhere to the laws of nature, unity, simplicity, and harmony. (Figures 2 and 3)

Figures 2 and 3. The Use of Material, Structure, Form in the Sense of Organic Architecture by F.L.Wright. Taliesin West, 1937
(http://en.wikipedia.org/wiki/Taliesin_West)

"**Unity** in organic architecture refers to the relationship of parts in a whole. Every part should display its own identity, but at the same time it should be amalgamated within the whole. In Wright's architecture, this idea also equates to the unity of site, structure, form, construction, furnishing, decoration and planting. It is possible to achieve unity in architecture as in the case of nature where the series of elements are organized so as to for a single entity" (Sonmez, 2006).
In nature, every living organism evolves in the laws of **simplicity**. Following this concept Wright tried to implement the use of materials and construction techniques accordingly.
"The essence of the concept of simplicity according to Wright is constitutional order" (Kaufmann, 1955). For a part to arrive a state of simplicity, it should be the harmonious with the whole.
In nature living creatures are in **harmony** with the surroundings. They interact with each other. And they are perceived as a whole. "Harmony refers to the integration between the parts. In organic idea, no part is greater

than the other constituents. They are integrated within the harmonious whole" (Sonmez, 2006).
In nature there is no enclosed space. We see this phenomenon in Japanese Architecture. "**Continuity** in Wright's architecture means that space enables moving inside and outside. Continuity means the freedom of space" (Sonmez, 2006). An organic building should be free and flexible. He freed the corners so as to maintain a sense of flow of space.
"Plasticity became one element in the principle of continuity. He called it the flesh that covered the skeleton. Instead of old method, the post and beam construction system, Wright formed a continuous structure…**Integrity** means the quality of being honest and strong in what you believe to be right in an individual. Wright's understanding of integrity in a building gives a sense of life. The expression of the identity of the building shows its respect and sensitiveness towards itself, its environment, and the life in itself, its environment, and the life in itself" (Sonmez, 2006). Wright's architecture reveals an astounding geometric **order**. He designed his buildings upon a unit system. He has developed his designs through a grid system.
"**Tenuity** is synonymous with thin and slender in dictionary. On the other hand, Wright employed this term as liberation of architecture" (Sonmez, 2006). Nature itself has quite thin and slender objects.
The character of a building for Wright is of utmost importance. He uses this principle to achieve a harmony with the building, its site its form and aim. The use of materials and appropriate construction methods are kept in unity with the whole building. Climatic conditions, geography, available material and panorama have always been the significant issues in giving character to the built environment. As a Turkish architect Mortaş quoted "It can be understood that we cannot deny the characteristics that differ from country to country according to the changing climatic conditions, traditions, life styles and conception of humanity. Therefore it is wrong and meaningless to locate any beautiful villa that we saw in a book in the middle of our land" (Mortas, 1936). All these principles developed by Wright could be lectured in the first year architectural education under the light of imposing the essence of architecture as a fundamental discourse.

Materials and Structures

"…I follow the building principles which nature has used in its domain"[9]
F.L.Wright

[9] *Frank Lloyd Wright Quotations*, www.geocities.com/soho/1469/flwquote.html

Materials form the structure and the envelope. They express the form, character, and quality of the buildings. The choice of materials is up to regional characteristics. Each region takes into account climatic tempered precautions. (Figure 4).

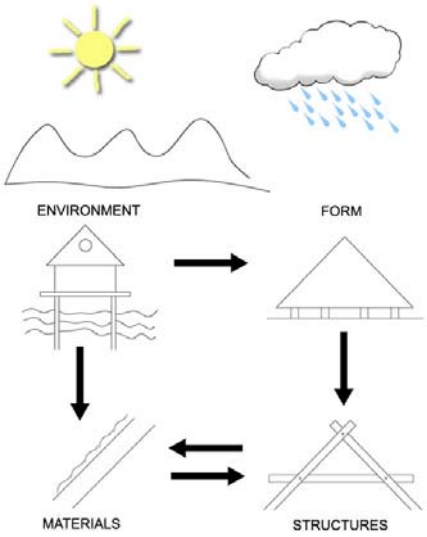

Figure 4. The Evolution of Organic Architecture

As Wright urged, “The form of the building now takes its shape by way of the nature of the materials according to purpose and building forms change as circumstances change” (Pfeiffer, 1993). He preferred to use materials as they are in a genuine way. The materials that are selected shall reflect the spirit of life.

Structures have been defined as assemblage of materials to sustain loads. But they also help to constitute the form of the object. If we keep this in mind we will end up with an assumption that structures may be used as mediums for the creative thinking in the design process.

“Designers have the power to figure out any constraints resulting from any necessity by referring to structures as a major design medium. Sometimes external constraints virtually determine the whole form of design” (Lawson,

2007). Structures may be of great help in providing suitable and favourable conditions for environmental control mechanisms and devices.

Conclusion

Architects have to be the decision maker determining all aspects of the environment. This universal process of problem solving is what design is about. Nature is the origin of all arts and sciences which inspire and leads the way also for architecture.

We have proposed a fundamental lesson which fulfils the need for combining separate technical architectural lessons.

Most of the junior students are unaware of the necessity of harmony between architecture and environment. They intend to bring forth original ideas without thinking the forces of the environment and the texture of the surroundings.

Thus this lesson can be regarded as the first step towards adapting architectural students for senior years.

In looking at our surroundings more perceptively we need to become aware not only of the visual appearances of things but the forces at work behind them.

Until we can see our surroundings in terms of environmental issues we will not be able to make sense of the architectural design.

We have to accept the buildings as a reflection of topography, the flora, the reverberation of other natural forces and entities of local characteristics of the region.

References

Green, P (1974), *Design Education Problem Solving and Visual Experience*, BT Batsford Limited, London.

Kaufmann, E (ed) (1955), Wright, *Frank Lloyd, An American Architect*, Horizon Press, New York, p.244.

Kucukerman, O (1985), *Kendi Mekanının Arayışı İçinde Türk Evi*, Apa Ofset, Istanbul, p.196.

Lawson, B. (2007), *How Designers Think*, Elsevier, Burlington, p.93.

Lind, C (1998), *The Wright Style*, Thames and Hudson, London, p.114,115.

Mortas, A (1936), Arkitekt Magazine, Istanbul, p.27.

Naden, C., J (1968) *Frank Lloyd Wright: The Rebel Architect*, Franklin Watt, New York, p.22.

Pfeiffer, B.B (ed.) (1993), *Frank Lloyd Wright Collected Writings*, Vol. 3, Rizzoli Int. Pub., Mexico, p.191.

Saarinen, E (1985), *The Search For Form In Art And Architecture*, Dover Publications Inc., New York, p.19.

Sonmez, F (2006), Organic Architecture and Frank Lloyd Wright in Turkey within the Framework of House Design, METU Masters Thesis, Ankara, p.8,11,17,19,21,22,25,33.

Wright, F. L (1939), *An Organic Architecture,* http://pbs.org/flw/legacy/essay1.html

Wright F. L., *Quotations,* http://www.geocities.com/soho/1469/flwquote.html

Zevi, B.(1950), *Towards an Organic Architecture*, Faber and Faber Limited, London, p.125.

http://en.wikipedia.org/wiki/Taliesin_West

A RESEARCH ON ARCHITECTURAL CONCEPTS AT FIRST YEAR DESıGN STUDIO

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ABSTRACT

The process of turning abstract into concrete is important in the architectural education. Behind an architectural product there is an idea which is orientated by design principles. Architectural education provides us to read this idea behind the design by concepts. In this process of education which includes theory and practice, students gain to look in an other way to the architectural product with creativity and responsibility.

In this context, a study has been made with YTU first year students about selected architectural concepts which are used as a tool of common language of architecture and the essence of design thinking. Concepts which has been chosen for this study are : "form-geometry, transparency, horizontal-vertical effect, integration with nature, harmony with environment, inviting, architectural promenade, inside-outside relation, breathing spaces, continuity, declared inside / outside space". The four steps of the study is given as follows:

1. **Architectural concepts:** Giving some information to students about architectural concepts which are chosen.
2. **Architectural research:** Research on concepts, examples from literature, sketch of concepts
3. **3D thinking ability:** Field excursion (to İstiklal Str.-İstanbul), sketches, perspectives.
4. **Architectural blend / superposition:** To blend concepts studying and design principles

Through the concepts which has been chosen for Architectural Design Studio 1, with the intention to get the student to perceive the space both outside and inside, following aims can be listed;

- to see the effect of turning abstract into concrete.
- to take out the idea behind the physical structure.

With these aims, a conceptualism study will be done and the skills of designing, presenting and perception via using the architectural language will be gained by the student.

The details about the study will take place in the complete text with products acquired at the end of study.

Keywords: *Abstraction, Architectural Concepts, Design Thinking, Architectural Language, Conceptual.*

The design process can be thought of as a series of transformations going from uncertainty towards information. (Laseau, 1989) The process of turning abstract into concrete is important in the architectural education. Behind an architectural product there is an idea which is orientated by design principles. Architectural education provides us to read this idea behind the design by concepts. In this process of education which includes theory and practice, students gain to look in an other way to the architectural product with creativity and responsibility. While analysing a design problem, abstraction can make it easier: on the first steps, making a set of concepts concerned , not only helps to gain time, but also gives the ability to take out the idea behind an object. Morever, designing with the help of concepts make students more creative and ambitious.

Conceptualizing can be determined as loosing an object's realities and moving into metaphysics. (İnceoğlu, 2004:58) Thinking design in an abstract way, needs to discuss common points but in a comprehensive way. In this context, we discuss conceptualizing as an abstraction. "Filtering the irrelevant details and reducing the object into a simpler state, ruling out the possibilities, classifying" are the ways of abstraction to produce a knowledge.(Serim, 2007:360) Conceptualizing method used in architectural education resembles a snapshot of a photographer (squinting the object) or beginning sketches of an artist.

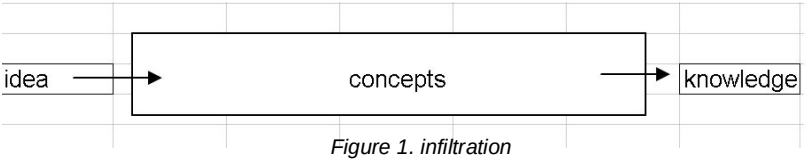

Figure 1. infiltration

In this context, a study has been made with YTU first year students of ADS about selected architectural concepts which are used as a tool of common language of architecture and the essence of design thinking. Architectural Design Studio 1 is the first design studio in the second semester of the architectural education. Students are expected to think three-diomensionally, compose spaces, gain skills and techniques related with designing and representation.
Through the concepts which has been chosen for Architectural Design Studio 1, with the intention to get the student to perceive the space both outside and inside, following aims can be listed;

- to see the effect of turning abstract into concrete.
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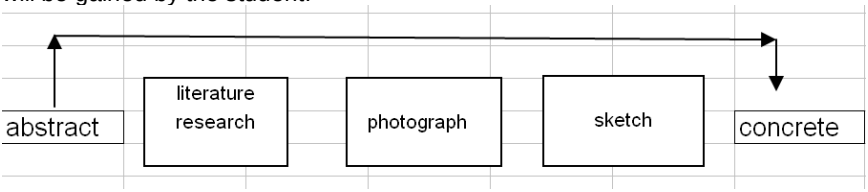


Figure 2. The methods of conceptualizing

Methods of this study includes literature research, field excursion with sketches from the area and photographs. These steps which bring abstract in to concrete end with solutions related with design concepts.

Steps of the study:

1.Architectural concepts: Giving some information to students about architectural concepts which are chosen

Concepts which has been chosen for this study are :

*form-geometry : Refers to the external three-dimensional outline, apperance of something-in contrast to the matter or content or substance of which it is composed. (Ching, 2002)

*transparency : Is the physical property of alowing the transmission of light through a material.

*horizontal-vertical effect: Physcologic effect of horizontal and vertical forms on human being. Perception of vertical items effect someone to feel smaller than normal and horizontal ones have an impact of infinity.

*integration with nature : Design concept adapted topography, including materials integrated with nature and giving the least harm to the nature.

*harmony with environment : Design concept considering the features of the environment and existing buildings.

*inviting : Attractive and tempting spaces (like entrances) which make people go towards it.

*architectural promenade : Part of a path through the most active parts of the community.

*inside-outside relation : Perception of outside from inside or vice versa. Interfaces which combines these spaces play a big role on the relation of inside-outside.

*interspace: A space between the building parts which is used to welcome, combine the blocks or as a breathing space.

*continuity : The linear pattern of the regular elements

*declared inside / outside space : Inside & outside spaces with absolute boundaries declared by elements like walls, trees, streets...etc.

Aim: To make students familiar with some architectural concepts which are used as a tool of common language of architecture and the essence of design thinking.
Method: Giving the first information about some architectural concepts.

2. Architectural research: Research on concepts, examples from literature, sketches of concepts
Aim: To read the idea behind an architectural product/the design by concepts.
Method: Researching from literature and finding some examples for each concept given. And discussing about the idea why they have chosen those examples for.
Outcomes: Examples for each concept as a photograph (researched by students)

*.*form-geometry*

**transparency*

**horizontal-vertical*

**integration with nature*

*harmony with environment

*inside-outside relation

*interspace

*architectural promenade

*continuity

*inviting

*declared inside / outside space

3. 3D thinking ability: Field excursion (to İstiklal Str.-İstanbul), sketches, perspectives.

Aim: To think the relationship between concepts & already existing products especially on historical sites

Method: Finding & defining the relation between concepts and their reflections on building sides. Making an abstraction study by students with their own skills of presenting

Outcomes: Photographes, sketches, perspectives of existing products in İstiklal Str. and their presentations of them

Figure 4. continuity

=continuity=

Students emphasize the continuity on the facades by the lines of windows and floor levels. Rhtym of windows and doors on the facade is conceptualized for continuity. Also this type of facade design decreases the building scale to the human scale. In the second sketch the window rthym of the wall continues the mosque's windows rthym.

Figure 5. interspace

= interspace =

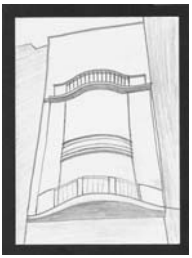
This is the enterance part of the Saint Antuan Church as an interspace. It combines the other church blocks used as offices and residances. Also it's a balcony and breathing space with flowers.

Interspaces used as a passage is important for joining streets (the second sketch). It's also an enclosed space which is secure, far away from the crowded city and attractive for its mystery.

Figure 6. horizontal-vertical effect

= horizontal-vertical effect =

In the first sketch, the vertical items of the facade are emphasized mostly, at the second, suprisingly horizontal items are shown as a vertical item on the whole. Although these items are made to change the effect of the buildings, in the second example the sketch shows that it doesn't work. These effects rescures the buildings from monotony.



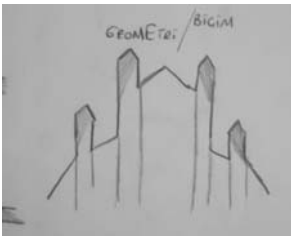


Figure 7. form&geometry

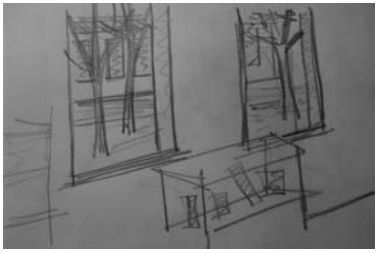
=form&geometry=

Form and geometry concept differs building facades each other. Rounded form consoles from the building at the first sketch softens the dioganal edges and serves a space for use. On the second one, form of the church represents a style of rising.

Figure 8. harmony with environment

=harmony with environment=

In this collage the combination of incompatible patterns as transparent and solid walls is used for harmony. In historical areas, designing old and new facades is an example of design approach.



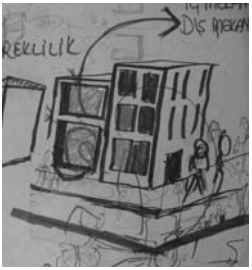
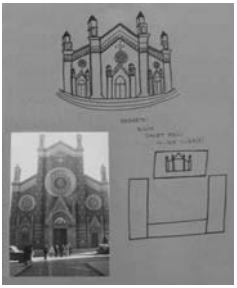


Figure 9. inside-outside relation

=**inside-outside relation**=

In these sketches we can see transparent facades provides inside-outside relation. We can feel uncertainty at boundries and feel as ıf we're at outside with big windows.



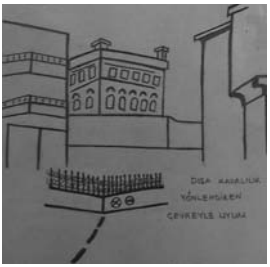


Figure 10. inviting

=**inviting**=

An example of enterance , inviting plan due to organization of the blocks. In the second sketch, the destined building directs to find way.

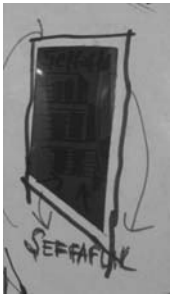


Figure 11. transparency

=**transparency**=
Transparent faces draw our attenton in an existing environment . In order to feel inside and outside of the building at the same time, this concept is used as a solution. In the second sketch transparency is presented by a sketch under a transparent material (acetate).


Figure 12. architectural promenade

=**architectural promenade**=
In these sketches of the İstiklal Street , the concept of the architectural promenade is predicated on ideas of movement and sequence. It symbolizes the journey through the end of the street.

4. Architectural blend / superposition: To blend concepts given and design principles

Aim: To see the effect of turning abstract into concrete, to take out the idea behind the physical structure

Method: Making a conceptualism study in design & with their own skills of designing, presenting and perception via using the architectural language

Outcomes: sketches of their projects , perspectives

-transparency
-integration with nature

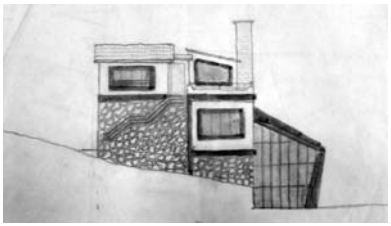
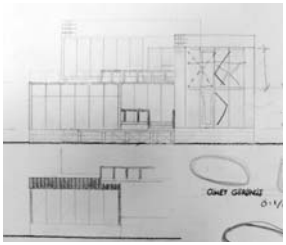


Figure. 13. outcome project 1



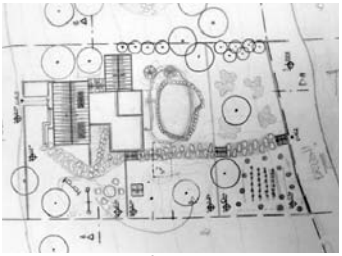


Figure. 14. outcome project 2

-transparency
-integration with nature
-interspace
-horizontal-vertical effect
-inviting

PERCEIVING THE WINE NEVER BEGINS WITH THE GRAPE AS AN OBJECT or TURNING BACK TO THE FLATTING EARTH AGE

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ABSTRACT

'..THE WINE NEVER BEGINS WITH THE GRAPE or RETURN BACK TO THE FLAT WORLD..'

A NEW METHODOLOGIC PROPOSAL for BASIC DESIGN

The wine never begins with the grape. This metaphoric statement points out a content of methodological approach that is for the phase of first confrontation in the formation of basic design of first year architecture student who newly face with education systematic of university. This new proposal, out of conventional approach, is based on behavioral experience and epistemology that offers an original outline of basic design courses.

Here, while the metaphor of the wine symbolizes the point of the student after the end and extent of the course process, the metaphor of the grape refers to prefabricated concepts outline like shape, floor, mass, void, composition etc. While students are let to fulfill that outline and again to reach the outer limit of static design information in the extent of conventional practices, it is aimed that concepts are empirically constructed by students as an Individual A in the proposed methodology.

Transformation from the grape to the wine before its treatment as a fruit has a demand of methodology and appropriateness of prerequisites that covers wind strength, soil permeability, mineral conditions etc. And; this transformation by qualitative spring is definitely dependent on these prerequisites. Because of that the mentioned prerequisites is a context that are related with place and time, Individual A is recalled to archaic age in the mean of representation where he or she has to face to limited possibilities that are obtained from physical environment and kind of completely deprived technological supplement as an assumption.

A clarification on the one of design problematic that are related with the way of this methodology operating states highly scope and content of the approach. It is urged to Individual A to constitute reasoning when the question is stated. If the world has flatness like a tray, how could the tree be in that world? At this point, already defined tree, world and existence knowledge of Individual A becomes outdated. In other words, Individual A has to face with his or her ability of reasoning or capability of self-skepticism. Namely, Individual A could not be able to construct the problem without reconstructing the concepts, related with design problematic, like two dimensionality, direction, lower-upper etc. So that; this situation forces Individual A to constitute his or her own design reasoning by individual

loneliness. In other words, Individual A could have to construct a peculiar design reality from Reality of physical environment. This is a shaping proc ess of the world by forcing the outer world that is by reason milking from behavioral experience. It is a time to go back to the title. The wine never begins with the grape. From wind, earth and willingness of the grape towards being wine. So, all mentioned conditions are tectonics that is out of time. (subspecie aeternatitis) Design resources of human-being thoughts also are hidden in the chaos of archaic area of reason.

Keywords: virtual field, distance, massive body,mute-practising, the verbs

PERCEIVING THE WINE NEVER BEGINS WITH THE GRAPE AS AN OBJECT or TURNING BACK TO THE FLATTING EARTH AGE

..THE WINE NEVER BEGINS WITH THE GRAPE…

-...dedicated
to Andrei Tarkovsky-

The zero-point thinking of making-do.

This is not a methodological way of basic design. It is a philosophical approach to basic design education that is so called ***zero-point thinking of* making-do.** Zero-point thinking doesn't work as theoretical process, but is in experimental core about mention that origins of human thinking in the case of building concepts, simultaneously and spontaneously.

In the architecture school, first-year students face to study in a field that is around zero-point thinking process. In this period, contrarily conventional basic design study is laid on the simple acts for example a stone leaves its 'nest' and replaces to the other location, 'moving' how it was, where it on and what by are questionable issue. Or its nest formation analyzes. Then by not using hands the stone moves once again by using a rope; wrapping, binding, nodding and so on. They are ***virtual field*** or organic concepts of making-mind. Using the hand or the rope are two different ways through relating with outer world. The hands conceal in nature. On the other hand, the rope getting out the nature means artificial ways works. Between the human body and natural object appears a ***distance*** which is coming from the tool i.e. the rope. Here the rope is a porter of virtual field which is signed by student's experimental or behavioral attitudes. The stone and its nest both of them are chaotic area of earth life or ***massive-body*** of hidden reason of nature. 'Correlation' is a key word here.

Correlation between human mind and nature by depending on the 'tool' i.e. hand or the rope moulds the touching. A primitive-culture or a child behaves in this same way too. Here it is a vanishing point of making-do mind. Creation of the distance between the human body and the nature starts on a judging process of reason. Dissolution of the distance means 'Culture'. Measurement of the distance means 'Time'. Creation of the distance means 'Techne. When increasing of the distance in nature is to be unseen and at same time synthetics emptiness emerges. The synthetic emptiness replaces chaos of nature. And it defines spaciously virtual. That ***virtual space*** which has no relation with nature is a new driver of human mind which is called technology.

Technological nebula doesn't contain the devices or instruments or installs and does not have any contents. Like the light, technological nebula doesn't convey anything but moves progressively to empty space. In this empty space, concepts which are known turn into untouchable but unyielding. Mute practicing without conceptual framework produces technological material sphere. If no conceptual-mind then human life is to become a satellite at this sphere, we should turn back to the beginning to correlative comprehensional activities. Of course, with our students.

The verbs in any language sign to virtual field of human mind unlike virtual space of technological sphere. As a threshold, all the verbs have born in between directly activity and natural object. Also, all of the verbs connect to human body as a tool to existing structures and build the new actualities. A stone which leaves its nest is to become aware of 'under', 'up',' over', 'cave',' mold', 'surface',' ground',' hard' as a concept which is to make a present of 'to push', 'to move', 'to touch', 'to handle', 'to convey', 'to lift'... 'to push'. For example; it is a structure of the virtual field. Stone manifests 'under' as a cave-shape by 'to push'. **The planar earth or the flatness of earth like a tray**. Before the embryonic stage, 'a baby' is at the stage of conception in her development. In this stage, 'the baby' as a raw materialistic organism deal to chaos. Afterwards developing her body formation should be recorded at this cryptic and chaotic text. So, the conception is a 0-point of externalization process then the conception is forced by outer world in the direction of internalization.(Marti E.(1996))

The baby resists her mother's womb where as outer world. This correlation between conception-baby and her mother characteristically can compete the relationships between the student and stone. During the student's internalization process, mental construction of student will be appearing by forcing of outer world. Like a kind of an animistic behavioral relationship between the student and stone shall be bipolarize. Mental construction of the student will be wrapped by oscillating between in this bipolarization. At this moment, the student does not have ready-made or prefabricated concepts even her / his conceptional approach. To give a name can be basic tendency for the student.

To naming instead of conceptualization is pre-concept or premature-concept. Simply it is just not whatever student's making-do at the same time her/his activating 'verb'. For example; painting to the stone's nest and giving a name to this painting cave. This kind of coating of a surface is to mental pro-production of molding. Coating-molding, surface-paint, cavity-crater, edge-circularity etc. These formations or figurations as a conceptual

knowledge can be frayed by the student but previously as their names. The reason of the student or picking up the stone is underlined in Per Bak (1997)

Kenan Güvenç (2005) circularity of the pebble-on the design-politics of human mind unpublished prehistory of the reason. Like analyzes on the sand hills, he thinks that the process of self-critical organization is understood as itself. Gathering or accumulation of relationships of particles or grains between to each other which organizes to the holistic order will be the cause of changing forms. At the moment of the sand pile collapse the primitive decides to lift up the stone.

In case of building concept, the other case issue is based on a question whether or not new appearance possible of a tree is redefined if the world is a flat like a tray. The aim of the case is to discuss reformation of current realities when fundamental circumstances are redefined.

It is aimed to exceed a appointed mould of the student skeptical thinking systematic. Formations, concepts and definitions like light, tree, geometrical orders, tropisms, scales, right, left, orientation, under, upper, and most importantly observer formation (to be awakened student about radical transformation of systems and observer organs that belong the world) are constructed like the very first time confrontations.

It is to remember that references of design should be changed when the conditions are redefined. It is let to notice sense of loneliness that is offspring of difficulties of human-being reasoning process when it is placed in position beyond time. Set backing in the concept of time lets to think not only restructuring the physical environment that we have connected but also representation forms of these new realities.

The difficulties to break off habits of students thinking mechanism have been laid out clearly and deeply in all manners by the proposals of the student in this topic. For example, the physical characteristics of the environment are developed on the solid state of the material in all proposals. Another data is that why have they dismissed questions of the reasons of their proposals three-dimensional configuration to any formations of earth's crust two-dimensional perception. More importantly, two dimensionality could have more complex formations and be judged as deficient tectonic when it is compared with three-dimensionality. There is no proposal in the final study that earth's crust could be a cloudy disc and as a related example trees could be tectonics like electro-magnetic thunderbolt.

The students could have been able to get back their mental bodies, clearly

as a representational, in the context of history not time and they have designed like professional who have a 10th century scientist paradigms. The last assignment after the outcomes from the study is to make ***a vessel for feet.*** The students who have a site trip to the stone quarry in the countryside have been orientated in the frame of 0-point design discussion.

There is a request that the students firstly reposition a half buried stone that is fitted to a hand. When the students pick up the stone in the first move, a question is on air. How do they know to use their hands to pick up the stone? Is there any divine inspiration for first person who has an idea of picking up the stone? The self-critical organization discussion of Per Bak(1997) is adapted to question the causes of picking up the stone. There are limitless possibilities that let a sand hill to heighten up it as much as possible by keeping its ground area in a constant dimensionality. And, possibilities, till this time, gets attention to the result that is pointed by a spontaneously, instantly, accidentally, casually analogically happenings of an index

Human mind does not have concepts at the beginning; namely, mind is buried in the nature like green into grass. Green is not a in the outer world like in a paint box. In other words, while human being picks up the stone incidentally, he or she is still in the stone.

This vegetative mind, constructed as a fictional mind in the outer world, is only possible by appearance a distance between the stone. But, another tool except hands is issued by moving the stone. While this tool is a ready made in nature at the beginning, the distance gradually is increased by transforming into a human-made object. Second direction of the discussion is about a nest that is left after the stone repositioning. Like a bird, it is allocated from its nest. And now, where is the destination?

A though discussion that takes several minutes on the concepts of alcove, crater, repositioning, movement, nest, under, upper and much more focused on mould and surface convey the students to one of the most important point. The origin of the conceptual existence of the stone is a limit or synaptic void between mould and molded material.

Yes… The stone and the cave have a surface, but both of them have their existence in their confrontations. Briefly, mind has produced a virtual surface beyond the stone and its cave surfaces, both as actual things. By the activity and picking up the stone, perceptual sensation field becomes operational. All right… But, the virtual field does go beyond confirmation of human being activity (implicitly for the stone) as a physical manifestation of existence

without nonappearance vision of any surface as a synaptic limited void.

And, if the confirmation was assumed as an adequate option, the activity could have repeated infinitively without any symbol production. Human-being remains as on/off switch in this closed circuit. To equip virtual field as a language cause a dialectic interaction between activity and virtual field. This is ***"a contemporal techne"***. Or. to create the distance.

Now, when logic of the process, developed in the studies of the students, is reconsidered as a reference in the previous paragraphs, every meaning of the activity as a verb activates a concept in the virtual field. For example, to hold the rope is to state a rightness. To wind a rope around stone means a gain of section plane in the winding section. Making knots organizes more complex mind, because it triggers more complex knit. If the action of knitting is issued on the stone, that lets us a concept of **"*volume"*** as a mould.

The rope reorganizes itself for picking up anything or any stone not only for the stone on the rope while the distance between the stone and us. The virtual field could become a hypothetic occurrence that is for an accepted representative, in namely without any referential object rather than being apparent in concrete thing in an action. When the virtual field is being extended, humanistic applications transforms themselves into more complex orders. And, if this situation extends the virtual field again and again, a stone or nature becomes indefinite and settles in the horizon. In the final step of the process, these are ***vessels for feet*** by the student designs. As a conclusion wine never begins from grape. The preliminary conditions convince the grape that converge the wine. The wine begins from the wind, fertility capacity of soil and surely the grape's desire is to be a bottle of wine...

References:

Tryphon Anastashia and Vone'che Jacques (ed)(1996) (In Piaget-Vygotsky The Social Genesis of Thought. Marti Eduardo, Mechanisms of Internalization and Externalization of Knowledge in Piaget's and Vygotsky's Theories-Psychology Press.

Bak Per (1997), How Nature Works, Oxford University Press, Oxford UK

Güvenç Kenan (2005)(unpublished book), Roundness of The Pebble-On The Design-Politics of Human Mind.

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Pelin Dursun studied architecture at Istanbul Technical University. She received her March degree in 1995 and PhD degree in 2002 from ITU Faculty of Architecture. Dr. Dursun has been a visiting scholar at University of Newcastle upon Tyne, CARDO, UK in 1995 and at The Bartlett School of Graduate Studies in 2000 and in 2004/2005 academic year. Her research interests focus on architectural design, design education, architectural morphology and space syntax. She has involved in a number of design projects including student social centres, conference rooms and fitness centres in different faculties of ITU and she is a member of the design team of “ITU Dr. Orhan Ocalgiray Molecular Biology and Genetics Research Centre” (with Gulsun Saglamer, Meltem Aksoy). Dr. Dursun is still teaching in Architectural Design Group of ITU Faculty of Architecture both at undergraduate and graduate level.

ABSTRACT

First year design studio is generally acknowledged as a preliminary environment where students are introduced to a new vocabulary of design and architecture. First year studio is also a space where students learn to learn, discover themselves, gain a critical perspective, express themselves and are trained to become an independent, responsible, intellectual individuals. First year architecture studio is an experience space where spatial knowledge starts to form. Studio space provides a cultural forum to code, to construct, to enrich the understanding and perception of space based on passed experiences and knowledge that are recorded, collected, compiled, reproduced and described.

The aim of this study is to provide a debate to discuss the means and tools to enrich, to encode spatial knowledge focusing on space experience. First year design studio, 2007-08 Fall Semester, ITU Faculty of Architecture is chosen as a case study and the fulcrum for the debate.

Keywords: *first year design studio, experiencing space, knowledge of space, design tools, spatial representation, communication*

DECODING SPATIAL KNOWLEDGE AND SPATIAL EXPERIENCE

Introduction

Main goal of the first year design studio is to introduce students into design activity and prepare them for design tasks, which get continuously more complicated in the following years. Therefore it is often assumed merely as a transitional program introducing a visual and verbal vocabulary of design. Moreover, it is the first and most important opportunity to explore and actualize oneself. The studio should enable the student as an independent intellectual and self-aware free agent. Studio is an environment to learn how to learn. According to Ledewitz (1986), the studio is a place for discovering learning. Schön (1987) describes the same phenomena as learning by action of the reflective practitioner.

In our understanding first year design studio is an environment where students are trained and equipped with skills such as thinking with concepts, expressing ideas verbally and visually, enhancing critical thinking, developing a critical stance, explicating thoughts, listening, working with others, experiencing space, managing time, creating intuitive knowledge about designing and building. Studio coaches an individual to become intellectually independent and helps him/her to develop a certain amount of awareness (Aydınlı, 2007).

First year design studio creates an environment in which students have a series of experiences leading to the construction of his/her *spatial knowledge*. We built our studio program of the `07-`08 Fall Semester on the assumption that the skills enhancing the experience of space play a crucial role among the other skills that are built up during design activity. Based on our studio experience, we presume that spatial knowledge stemming from spatial experience is a network interwoven between interrelated concepts such as body, scale, proportion, experience, perception, atmosphere, senses, time, memory, context, light, structure, materials, architectonics, spatial articulation and syntax etc. Studio provides an environment to produce, to code, to enrich the perception-recollection of space using concepts mentioned above, and a milieu where these experiences are recorded, collected, expressed and reproduced. Studio provokes the students to internalize, communicate, and enhance the repertoire of spatial experiences.

One has to represent experienced – and proposed – space in another medium than the space itself, in order to internalize and communicate spatial experiences and to enhance the repertoire as a consequence. Externalizing the thought process is not only a presentation problem but crucially related with enhanced thinking and augmented cognitive process (Arnheim 1972).

Through different practices such as drawing sketches, sections, plans, diagrams, making models, photographing, mapping, writing, making movies and animations, we are creating a new environment to rethink and reinterpret the space experience, objectified and externalized.

The aim of this paper is to explore the means to develop and enrich spatial experience and related repertoire, discussing the role of tools that contribute to spatial knowledge. The Fall Semester of 2007-`08 First Year Design Studio at ITU Faculty of Architecture will be the case study to provide a framework of debate. The paper discusses our agenda and program, its consequences and benefits, departing from the studio work, seminars, workshops and excursions via maps, diagrams, texts and photographs.

Mapping Spatial Knowledge and Spatial Experience

When analyzing spatial experience, we encounter some questions such as: What kind of knowledge, skills, and background enrich our vocabulary of spatial experience? How are our perceptions and interests of space formed and developed starting from the beginning of our lives? Is it possible to assume that the more we know about things in general, the more we will perceive them? When this is translated into our case, do knowledge of 'Space' bring a deeper perception and interest about it?

We may suppose that spatial experiences as a whole interweave our spatial knowledge. On mutual terms, knowledge then contributes to experience, too. In order to analyze and discuss spatial knowledge a sketchy network of issues and concepts can be mapped (Figure 1). An architectural designer whether he/she is a beginner or an expert, accumulates experiences related to these numerous concepts throughout his/her life and weaves a personal spatial knowledge repertoire. This spatial knowledge is ever changing and continues to grow with personal experiences, as some aspects get strong and some fade out in the length of time. In this perspective, spatial knowledge is subjective, contextual and time-oriented, but not absolute and stable.

We may explain differentiations in people's experiences with varying interests and activities. A frequently traveling designer who is exposed to different cities and spaces will record and accumulate spatial experiences according to his/her bodily encounters with spaces. On the other hand a designer with a different history, who is working seven days in office will compute space through representations and his/her repertoire of space will develop accordingly.

The Program: First Year Design Studio, ITU Faculty of Architecture, Fall Semester 2007-08

The studio was composed of complementary workshops, homeworks, projects, and excursions which are discussed as follows.

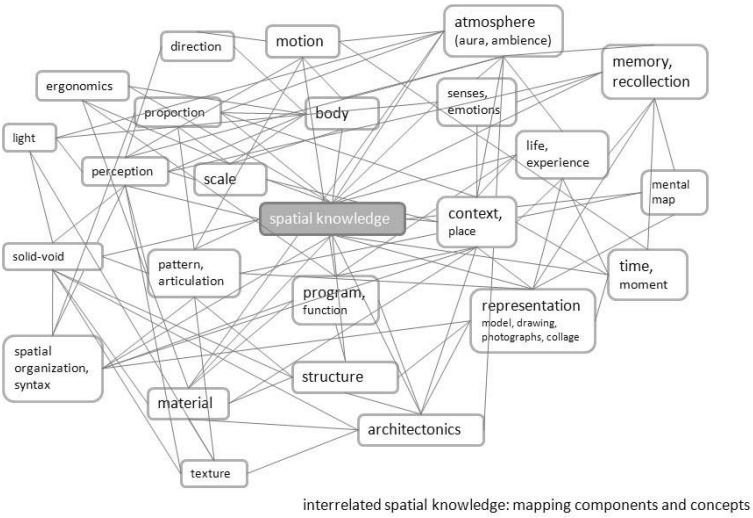

Figure 1. Interrelated Spatial Knowledge: Mapping Components and Concepts.

Workshops:

W1. Stool

On the first day studio, students were asked to choose a partner and build a cardboard stool. Every group had two large pieces of cardboard and three hours to design and build. The issues such as sitting as a simple human action, the weight and proportions of human body were covered. Economic and simple use of the material in a most efficient way with minimum waste was required in the designs. Another limitation of the assignment was to design all connections without any additional material such as glue and yet create structurally sound details using cardboard.

Figure 2. Results of stool workshop, Discussion and Exhibition

W2. Recalled Space

At the second day, very early in the program, a 4-hour workshop with an aim to represent very first remembered childhood space was organized. Students tried to represent the space vaguely, as it is transformed within the mind, referring to accompanying feelings not only to material objects. They were asked to make a model of that recalled space using waste materials such as newspapers, plastic bottles and wires. Some of the resulting models -on the contrary of what was expected- were based on objects in the space such as a cradle or a chair and an event such as a dog hit by a car, rather then spatial qualities of that space.

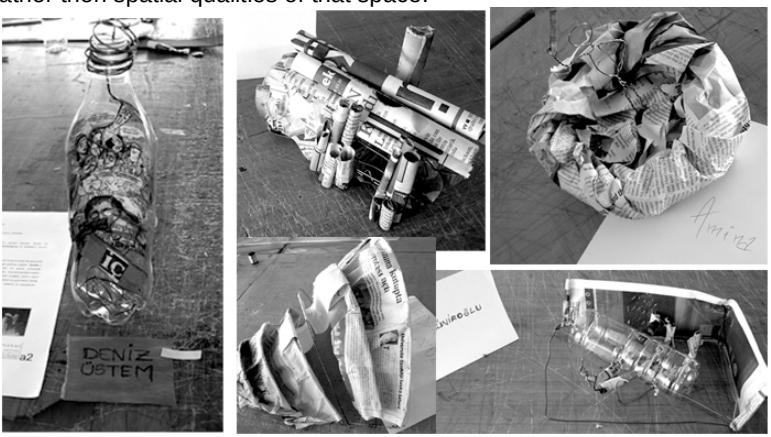

Figure 3. Models of Recalled Space

W3. Florya/Re-formation: Sand Study

A field trip to Florya beach was organized to experiment with sand. The aim of the trip was to explore the means to recreate naturally occurring

formations of sand with wind, waves, the play of sunlight creating a shadowy solid-void texture, to discover new forms, textures, interactions.

Figure 4. Reformation, Field Trip to Florya.

Home Works:

HW2. Shoe Assignment (Footloose)

The aim of the assignment was to represent and reproduce a shoe by a series of different means such as technical drawings and models. In seven successive steps of weekly assignments, students made models of a shoe using different techniques. They drew plans and sections of every model. Accompanying these drawings, each week they prepared a poster with a different theme such as tipography, photographic collage, collage, line, texture, representing that week's model.

HW3. Writing:

A small written assignment is given to students requiring them to describe an urban space or a building using text and diagrams.

Projects:

P1. Scaled-Space

First project is an inquiry of different spatial experiences by transforming a selected home electronic appliance shell into a scaled down architectural promenade for a 1:50 plastic human model. Plastic shell of an old computer monitor or a vacuum cleaner provides a space to explore, to discover characteristics of a space, to experiment without any prior expert knowledge. It is a playground to travel between scales up and down and recreate an environment for the model man using concepts such as scale, light, color, texture, proportion, height, dimensions, inside outside, continuity, movement etc. (Yaneva, 2005).

Figure 5. Scaled Space.

P2. Void-Space

This project analyzes an existing modern shopping complex from 1950's Turkish Modern Architecture, IMC. During the study, IMC was already selected as a venue for the 10th Istanbul Biennial. The semi open-air complex and its open courtyards were reverse engineered. Groups of students studied different critical sections of the building which manifested its transparency, solid-void qualities, and spatial constructs. The building's structure, components, scale, everyday life, movements, context and relationships were analyzed. Then, the plans and sections of this-perceived and experienced- real space were drawn and 1:50 scale large partial models were build. Discovered characteristics of the space are represented with a layered-section. (Figure 6)

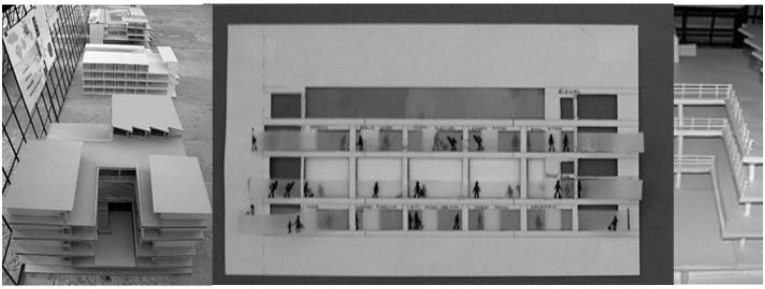

Figure 6. Void Space, Models and a layered-section drawing.

P3. Mapping the Movement

Karaköy, which is still a very busy old port of the city, was chosen and analyzed as a site for further projects. Students were asked to 'map' the site concerning its everyday life and forces. Mostly, the movements of people and merchandise were recorded, explored, mapped and finally represented using dynamic representation techniques such as animations.

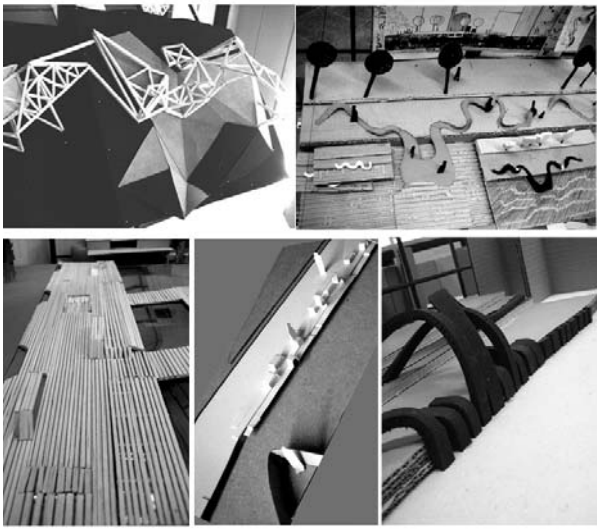

Figure 7. Space on the Shore.

P4a. Space-on the Shore

On the shore of Karaköy, minor extensions and additions to the land-water interface which covered basic human actions such as sitting, resting, leaning, reclining, standing, walking, running were designed. The basic bodily actions through the waterfront and their relationship with external agents (wind, sun, shadow, cold, noise, waves, view…) and existing local life (flows, continuities in Karaköy) was the only program of this project. Design proposals emerged a series of variation models representing a variety of interventions on the land-water-human interface. (Figure 7)

P4b. Space-on the Street

The last project "On The Street" concerned a lot more issues than the former ones. Thus, it sweeps a large area on the 'Spatial Knowledge Map' in Figure 9. Students found a way to annex to an existing context by developing a simple but necessary program. Some of these programs are: public toilets, exhibition spaces, small shops, ateliers, storages, shelters, info boxes or sometimes a hybrid of two functions. The designs were expected to set not only programmatical connections with the narrow streeted, tight city space but also proportional and contextual relations. Minimum volumes, and effective sections were crucial in the designs.

Figure 8. Space on the Street.

	concepts/ components	operations
w1. stool	material, body/ergonomic, structure, architectonic, detail, scale	communication with craftsmen, hands-on, practical thinking, simplification, working in teams
hw2. shoe	representation (graphical expression techniques + model making techniques)	appropriating, rationalizing a form, discovering the shell, generating variations
w2.recalled space	memory, representation (models, writings)	recording space, recalling space, expressing space
w3. re-formation	texture, light, pattern ,atmosphere, material, representation (photography)	reformation
p1. scaled space	scale + dimensions + proportions, body, perception, memory, representation (sections, models)	analyzing, discovering body-environment relationship, using personal experiences from the past
p2. void space	structure, architectonic, scale , perception, atmosphere, context, representation (sections, models)	analyzing, layering, model making, reverse engineering, introducing surveying techniques
p3. mapping the movement	atmosphere, context, movement, living, patterns, time, sensation, representation (maps, diagrams, computer simulations)	analyzing, abstracting everyday human actions into data, communicating with people, constructing a working theory
p4a. space on the shore	atmosphere, context, body /ergonomic, perception, scale, program, representation(models, diagrams, sections, collages, photomontages)	analyzing, discovering body shape space relationship, experimenting with primary space makers; walls, slabs, working on variations , working out a discourse out of dispersed data
p4b. space on the street	atmosphere, context, program, space syntax + spatial articulation, scale, perception, body /ergonomic, structure, material, architectonics, representation	analyzing, discussing dialectics of new and old, experiencing enclosure, finding an appropriate place to touch, join(t)ing to an existing situation, experiencing vertical circulation

Table 1. Concepts and Operations

Conclusion

The projects, the components of spatial knowledge and acts/operations to generate it which have been discussed above can be manifested in the following table. (Table 1).

Figure 9 displays two different ‘spatial knowledge maps’ among all studio work covering the semester. These maps are generally dissimilar but sometimes have intersecting zones. This differentiation and varying emphasis on different concepts is important to develop different skills. Last map is a sum of the whole semester work and superimposes all the affected zones relating to different spatial concepts.

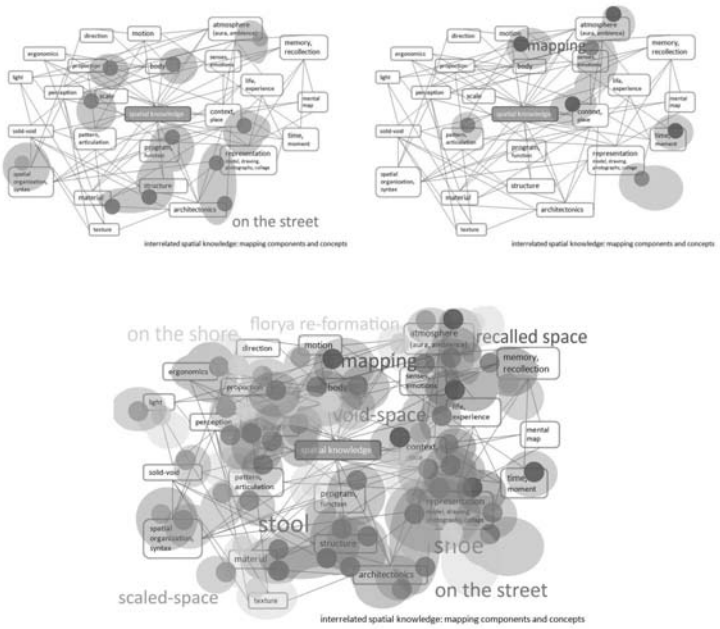

Figure 9. Interrelated Spatial Knowledge, *Mapping Components And Concepts With The Projects. ‘On the Street’, ‘Mapping the Movement’ and ‘Superimposed Map’ of all projects.*

References

Arnheim R. (1972), *Visual Thinking,* University of California Press

Aydınlı S. (2007), *'Awareness' as a design paradigm*, chapter in The Design Studio: A Black Hole, ed. Sağlamer G., pp 113-136, YEM Istanbul

Ledewitz, S., (1986), *Why Teach Design?*, A Contribution to the Faculty Symposium on Design Carnegie-Mellon University, January 10-11, 1986.

Schön, A. D., 1987, *Educating the Reflective Practitioner*, John Wiley & Sons.

Yaneva, A. 2005, *Scaling Up And Down: Extraction Trials In Architectural Design*, Social Studies of Science, 35/6, pp 867–894

SKETCHING LESSONS FROM UTOPIAS: TRANSFORMING A BUILDING SITE INTO A RECREATIONAL SITE

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ABSTRACT

As far as architecture education is considered, the actions of “designing” and “playing” may become interchangeable; they may become intertwined:
Playing/Designing: “To engage in an activity with the aim of materializing or conjuring up something, or simply passing time, enjoying oneself, getting distracted, and so on..”
Without doubt, the most exciting thing for any student introduced to the wonderland of architecture is to discover ways of design unique to herself and design things never before designed by others. This search for “uniqueness” is the basic characteristic that makes the game enjoyable: A design process of continually searching for new designs, questioning, doubting, pursuing the “other”.
In today’s architecture education, there is a potential danger in the search for “uniqueness”: A decrease in the design tools and processes based on the student’s imagination, and an increase in educational models focusing on the end result by taking “shortcuts”.
At this point, samples of utopian architecture – the most playful, childlike, naughty vein of the field – may inspire new models in architecture education. The present study is an imaginative experiment on how architectural utopia sketches may form the base for various methods, particularly for students in the early stages of their architecture education: A search for clues of an education independent of prescriptions; far from the “real”, “limitations” and “what is to be built”; and close to “fantasies”, “games” and “sketches”. The basic questions that nurture this search may be listed as follows:

- Considering that each utopia produces creative design criteria, processes and presentations different from others, is it possible to make students seek “independent” ways with their own creativity and excitement (before having adopted and memorized a (few) design methods)? Is it possible to develop original design methods and tools, and to place these exercises at the very heart of designs?
- Can it be argued that social, literary and architectural utopias have been designed in an amateur (even “childish”) way that is easy to understand and would appeal to everybody, but also that this amateur attitude is a conscious choice? Is there a possibility for a search for bold, alternative and experimental attitudes far from professional and memorized methods?
- In the rapid process of change seen in architecture where the “creative” is continually emphasized, can the boundaries of architecture be extended to the land of dreams? Is it sometimes possible for dreams to encompass words to be said about the way daily life goes?

Keywords: *Architecture education, utopian architecture, imaginary, design, play*

SKETCHING LESSONS FROM UTOPIAS: TRANSFORMING A BUILDING SITE INTO A RECREATIONAL SITE

Architecture education itself can be taken as a design problem and focus continuously on how we can reach the better, the different, the more correct. Changing conditions, different approaches, new needs or alternative thoughts can be accepted as basic design criteria for this design education (or educational design). The journey may start from these criteria, it may encompass the excitement of reaching the unique, and terminate in alternative education/design methods. Or may be not: The design journey is actually this process of seeking. A search for the alternative, the route of this journey may be decided with the help of design studios: Considering that any design-related information is turned into projects by students and that these projects directly make up students' design resource, it is obvious that these studios are the most open areas to transformation, thus allowing for different ways of design.

The biggest joy of this study is the search for an uncommon area of "excitement" in-between "design", "games" and "a world of imagination": "Messing with" the settings of the existing architecture education system with a "childish" enthusiasm, looking from a different perspective to the common implementation of education in the unchartered territory created by completely "imaginary" architectural projects. At the starting point there is acceptance:

As far as architecture education is considered, the actions of "designing" and "playing" may become interchangeable; they may become intertwined:

Playing/Designing: "To engage in an activity with the aim of materializing or conjuring up something, or simply passing time, enjoying oneself, getting distracted, and so on.."

Emphasizing the relationship of games and design, Kojin Karatani defines design with Wittgenstein's concept of "the game whose rules change as it is played". According to Karatani, after each step in the architectural design, the process becomes enriched with new rules and decisions. This turns design into a lively area of sharing and interaction peculiar to games (Karatani, 1995).

Without doubt, the most exciting thing for any student introduced to the wonderland of architecture is to discover ways of design unique to herself and design things never before designed by others. This search for "uniqueness" is the basic characteristic that makes the game enjoyable: A design process of continually searching for new designs, questioning, doubting, pursuing the "other".

At this point, such “unique”, “other” and “gamelike” searches of the architecture student appears in the most imaginative vein of architectural design: Utopian architecture. Samples of utopian architecture – the most playful, childlike, naughty vein of the field – may inspire new models in architecture education.

Defining the unreal but imagined in the most intense and direct way, utopias multiply with a glittering and playful structure in the darkest and most tumultuous ages of humanity (as if to spite these times). This multiplication may be seen as a sign of new ages to start in the history of humanity.

Born during the darkest time of the 20th century, the post-World War II sketches of utopias each led to heated debates (as most projects of this age were far from the closed, incomplete, imposing, tidy and static structure of utopias, these imaginary projects should best be called “sketches of utopia”). They can be accepted as games represented by the concepts of the time.

According to Guy Debord, the 1960’s were the years when utopias and games came closest to each other. Debord believes that the new urban approach of this era which he calls a new “game area” is closely related to the changes caused by industrialization: In this “game area”, new urban designs can be created “with the differentiation in freely established game rules” (Debord, 1995). The hopeful and optimistic atmosphere of the era lies beneath this popularity of the concepts of games and utopias in the 1960’s: On the top of the list of most debated topics were the dreams about how people would spend their free time in the near future. Games and artistic activities were the first to come to mind for these leisure times.

On the other hand, Bernard Suits directs our attention to the similarity between “playing” and “utopic existence”: According to him, utopias involve an imaginary world torn away from the reality such as in games, and this imaginary world helps interpret the reality in a different way (Suits, 2005).

At this stage, it may be good to stop the “game” for a while and visit the “design class”. However hard it may attempt to be efficient and successful, the design education offered at architecture schools have two main problems.

The first one may be summarized as “a decrease in the design tools and processes based on the student’s imagination”. Drawing/presentation based computer programs may tear a new student apart from the context and story of the design from a “shortcut” and drift him to far away places. Such programs which tend to present the designed and almost finished (and which currently have the function of being a presentation tool, rather than a design tool) take the candidate architect on a journey around the common rather than new searches. These programs, which are far away (currently) from the hazy, turbulent, blurred, tense, complicated, unknown, nerve-wrecking, challenging, efficient wonderland needed by the nature of the

design process (inadvertently) keep students from unique and creative game areas.

The second problem is the “pressure that the professional work life puts on education models”. The demands made by students’ future workplaces from architecture schools always intersect at he same points: Quick, practical, down-to-earth designers who can use advanced computer aided design programs and can complete projects in the shortest time possible parallel to the demands of the market. Such demands naturally affect education models and therefore bring “market conditions” into design studios: General expectations built on end results and application may result in a “shortcut” connection between education and the current operations of professional applications.

Instead of judging or bedaubing the steps taken with good faith, which aim to prepare the students to the situations that they will encounter after graduation, an alternative space may be obtained with this question: “Is it possible to find any other way to raise efficiency of the education process?” After this main question, other questions may be multiplied, retaining the dreamlands of the students, to enhance various alternatives for the current education systems: How can the “unique” “quite different” and “playful” creative researchs and flame of enthusiasms of the architecture student, at the beginning architectural adventure, be kept fresh? Considering that each utopia produces creative design criteria, processes and presentations different from others, is it possible to make students seek “independent” ways with their own creativity and excitement (before having adopted and memorized a (few) design methods)? Is it possible to develop original design methods and tools, and to place these exercises at the very heart of designs? Can it be argued that social, literary and architectural utopias have been designed in an amateur (even “childish”) way that is easy to understand and would appeal to everybody, but also that this amateur attitude is a conscious choice? Is there a possibility for a search for bold, alternative and experimental attitudes far from professional and memorized methods? In the rapid process of change seen in architecture where the “creative” is continually emphasized, can the boundaries of architecture be extended to the land of dreams? Is it sometimes possible for dreams to encompass words to be said about the way daily life goes?

All these questions form the basis for different and experimental designs for a design-oriented process: A search for clues of an education independent of prescriptions; far from the “real”, “limitations” and “what is to be built”; and close to “fantasies”, “games” and “sketches”

The history of architecture may be read alternatively with the help of imagined but not yet materialized designs: The history of architectural utopias has a different wealth with all the colors of imagination. The designs that constitute this wealth make up a long list of project characteristics: The

dilemmas they try to solve, concepts that belong to the era they were designed in, events they were inspired by, living area preferences, the way they treat the historical texture, the way they interpret the nature, their evaluations of city life, elements of excitement and joy, the prefered building materials, the conditions of the era they belong to, ways of representation, the lifestyles they offer, situations they resist, sources of inspiration.
Including the main components of imaginary projects, this list may be read in several different ways and thus become diverse, different or longer. Based on an almost century long history, the history of utopias may be treated differently by each interpreter.
At this point we may start disassembling the sketches of utopia into their parts and evaluate these parts with reference to the list mentioned above: By quickly playing with these imaginary projects, deforming and distorting them, replacing them, aligning them with one another, we can try to draw a general framework and then launch a different design/game model within this framework to use in architecture education.

The dilemmas they try to solve:
The problems identified by these completely imaginary projects related to the era they were designed in and the solutions they propose to these vary: While the name father of the concept "utopia", Thomas More, developed in his work *Utopia*[10], solutions to the main problems of particularly European cities in the Middle Ages (More, 1834), Robert Owen designed *New Harmony (Indiana)*[11] due to the negative effects of industrialization on cities in the 19th century (Owen, 1948).

Concepts that belong to the era they were designed in:
The spirit of the era directly penetrates into the structure of the work created: While Le Corbusier turned his own idea of "plug-in" in the early 20th century

ENDNOTES:

[10] *Utopia*: Consists of 54 cities in the island, all large and well-built: the manners, customs, and laws of which are the same, and they are all contrived as near in the same manner as the ground on which they stand will allow. The nearest lie at least 24 miles distance from one another, and the most remote are not so far distant, but that a man can go on foot in one day from it, to that which lies next it. (*Designed by:* Thomas More / 1516)

[11] *New Harmony*: When Harmony the society decided to move back to Pennsylvania around 1824, they sold the 30,000 acres (121 km²) of land and buildings to Robert Owen, the Welsh utopian thinker and social reformer, and to William Maclure. Owen recruited residents to his model community, but a number of factors led to an early breakup of the communitarian experiment. (*Designed by:* Robert Owen /1824)

into *Contemporary City (Ville Contemporaine)*[12], with the basic concepts of modernism which was adopted passionately at the time (Corbusier, 1986), forty years later Archigram took Le Corbusier's "Plug-in" to design *Plug-in City*[13] which ended up as a different ideal city created by using a different and critical interpretation of modernism (Cook, 1967), (Cook, 1972).

Events they were inspired by:

Inventions, discoveries and successes of an earth-shattering caliber open new horizons in the imagination of designers: while the debates caused by space trip and space dwellings led to the innovative design of *Sketches for a Space City*[14] (Gaillard, 1964), (Maymont, 1972), the DNA spiral discovered in 1953 inspired the *Town plan for Tokyo*[15] (Kurokawa, 1962), (Kurokawa, 1972).

Living area preferences:

In the search for an ideal life style, the yearning for unique architectural designs result in different approaches to living area preferences: While *Unabara (Floating Industrial City)*[16], an example of the commonly seen living areas over seas, offers a life independent of land and away from cities (Kikutake, 1972), *Space City*[17] chooses the cities we live in as its living area and includes units to be located in certain areas of these cities (Isozaki, 1965), (Isozaki A., 1972).

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[12] *Contemporary City (Ville Contemporaine)*: An unrealised project to house three million inhabitants. The centerpiece of this plan was the group of enormous sixty-story cruciform skyscrapers built on steel frames and encased in huge curtain walls of glass. (*Designed by:* Le Corbusier / 1922)

[13] *Plug-in City*: A re-arrangable urban project located in prefabricated units with a predetermined lifespan and in a cage system forming the backbone of the project. (*Designed by:* Archigram (Peter Cook) / 1964)

[14] *Sketches for a Space City*: A space city project which is developed on the idea that life in space will be possible in the future and which offers a model for non-gravitational places. (*Designed by:* Paul Maymont and Renée Sarger / 1962)

[15] *Town plan for Tokyo*: Suggesting a new development plan for Tokyo, this project and its three different structures offer a type of frame system and establish an infrastructure for particularly the units within this frame. (*Designed by:* Noriaki Kurokawa / 1961)

[16] *Unabara (Floating Industrial City)*: Planned as an industrial floating city for a population of 500,000, the city consists of two rings, namely, the inner ring for housing space and the outer ring for production. The two rings are inter-connected by an administrative block. (*Designed by:* Kiyonori Kikutake / 1960)

[17] *Space City*: The project presupposes a vertical service core built inside existing city centers with joists stuck into them and units attached to these joints. Other major concepts of the project were flexibility, openness, transformation, and multiplication. (*Designed by:* Arata Isozaki / 1962)

The way they treat the historical texture:
Different views exist about the use of areas with historical value as design input in utopic projects: While *Crater City*[18] designs the new city around the old one which has a historical texture (Chanéac, 1964), (Chanéac, 1972), the project known as *Paris Spatial*[19] is based on the idea of leaving the city intact but adding a new layer to it (Friedman: 1962), (Friedman: 1972).

The way they interpret the nature:
The relationships these projects establish with the nature show that they have different sensitivities: Based on the design idea that there should be minimal contact with the land so as not to damage the nature and therefore using big legs to elevate the entire city, *Mobile City*[20] is engaged in a large-scale search (Friedman, 1960-61), (Friedman, 1972), whereas *Living Pod*[21] offers a smaller-scale housing alternative in order to minimize the damage that dwellings in an ideal city give to the nature (Greene, 1972).

Their evaluations of city life:
The cities we live in and different readings of the lives we live in these cities present different solutions for ideal dwellings: While *Intrapolis (Funnel Town)*[22], designed with the idea that the untidy structure of existing cities affect people's psychological health negatively, claims to offer a city model appropriate for urban people (Jonas, 1972), *Arctic Town*[23] chooses an area

[18] *Crater City*: Initiated in 1963 as a research project and finalized in 1968, this project suggests a three-dimensional frame system around the old/existing city and offers to patch this system with different space alternatives which can be produced quickly "like cars". (*Designed by:* Chanéac / 1963-68)
[19] *Paris Spatial*: Designed to prevent the destruction of Paris city center to meet new needs, the project uses giant feet to enable elevated layers and thus create the spaces that the city needs. (*Designed by:* Yona Friedman / 1962)
[20] *Mobile City*: A spatial structure raised up on piles which contains inhabited volumes, fitted inside some of the "voids", alternating with other unused volumes. This structure may span certain unavailable sites, and areas where building is not possible or permitted (expanses of water, marshland), or areas that have already been built upon (an existing city). (*Designed by:* Yona Friedman / 1956-1960)
[21] *Living Pod*: Self-sufficient in terms of energy and capable of processing its own waste, this cell-like project is made of mobile units in which different functions can be performed with different machines. (*Designed by:* Archigram (David Greene) / 1966)
[22] Intrapolis: The project is envisioned to be built on the outskirts of the city and offer necessary functions. According to Jonas, a city can only have a balanced nature if it has "introverted" buildings, away from traffic, in touch with the sky and its neighbors. In this new design, transportation problems have been solved and public places are of paramount importance. (*Designed by:* Walter Jonas / 1960)
[23] *Arctic Town*: This polar city project to be constructed in 3 square km transparent domes aims to serve 15.000 to 30.000 people. (*Designed by:* Warmbronn Studio (Frei Otto and Ewald Bubner) / 1971)

of no urbanization far from existing cities and offers cities in the poles (Otto, Bubner & Tange, 1972).

Elements of excitement and joy:
A common design method is to start from different excitements and joys to create brand new living areas: *Project for the Auroville City*[24], which has the excitement of turning the views of a philosopher called Sri Aurobindo into a city design (Anger, Braslavsky, Heymann, 1965), and *Trigonic Spatial Cells*[25], which is based on the idea that people should live hanging in the air (Dahinden, 1972), are just two examples of the diversity of the excitement and joy seen in utopias.

The preferred building materials:
A design approach that has been tried before is to imagine the use of new and unused structural materials in building new and unique living areas: The use of brand new structural materials is the common point of *Chemical Architecture*[26], which is based on the idea that living areas should be built easily, changes should be possible later depending on need, and eliminated easily afterwards (Katavolos, 1962), (Katavolos, 1971), and *Pneumatic Residential Cells*[27] which was planned as inflated units with the help of new construction technologies (Jungmann, 1972).

The conditions of the era they belong to:
Even though they may not be looking for direct solutions to the issues of daily life, utopias embody the conditions of the era they are designed in: *Instant City (Une imagerie de vie urbaine a la campagne)*[28] contains many

[24] *Project for the Auroville City*: A partially materialized project designed for people following Sri Aurobindo's philosophy and living in a commune a few kilometres north of Pondicherry in India for their spiritual development. (*Designed by:* Roger Anger, Pierre Braslavky, Mario Heymann / 1968 -)
[25] *Trigonic Spatial Cells*: A suspended project which envisions steel cables in a valley or between two mountains, and which involves mobile planes on which equilateral triangular cells of 10,35 m sides will be placed. (*Designed by:* Justus Dahinden / 1965)
[26] *Chemical Architecture*: Believeing that developments in the field of chemistry can be applied in architecture, this project is based on the idea of using a new chemical construction material which can take any form and be used anywhere (especially on the water). (*Designed by:* William Katavolos / 1960)
[27] *Pneumatic Residential Cells*: Made of an accommodation unit equipped to adapt to various climatic conditions, the project consists of bunches designed to be used on land, hanging in the air, on the water or in space. (*Designed by:* Jean-Paul Jungmann / 1967)
[28] *Instant City (Une imagerie de vie urbaine a la campagne)*: This project bares resemblence to Ideas Circus in both its designers and the suggested lifestyle, and defines itself as a "provocative" structure which will lead to social enlightenment. It has

details specific to the '68 era (Archigram, 1969), (Drew, 1972), while *Manifestation Plastique (Sculptured urban landsape)*[29] clearly displays concerns about emerging traffic problems in cities at the time (Lefebvre, Karczewski & Zandfos, 1972), (Valadares & Benoit, 1968).

Ways of representation:

The representation of the projects forming the history of utopias are as diverse as their contents: Designed 3D from all perspectives, *Archology (Architecture + Ecology)*[30] has its entire details shown in technical drawings (Soleri, 1968), (Soleri, 1972), the representation technique used in *Project for Tel Aviv*[31] is a giant urban model (Lubicz-Nicz & Pellicia, 1964), (Lubicz-Nicz & Pellicia, 1972).

The lifestyles they offer:

The suggestions put forward by these sketches as alternatives to existing lifestyles assume important roles in the shaping of designs: While the lifestyle advocated by *Bus City (Cité Autobus)*[32] is based on the idea of continuous travel (Rottier, 1966), the life offered by *Mesa City" Ideal City Project*[33] is based on continuous education (Soleri,1968).

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been claimed that the architectural environment created through this project will trigger different knowledge and feelings by emulating a circus and taking marginal city lives to outside of them. (*Designed by:* Archigram (Peter Cook, Ron Herron, Dennis Crompton) / 1968)

[29] *Manifestation Plastique (Sculptured urban landsape)*: Consisting of a transportation ring around Vetheuil, a city aside one of the curves of the Seine River, the project envisions new accommodation units in the mountains surrounding the existing city. Leaving the old city center intact and even protecting it, the project offers a transportation system operated with air pressure. (*Designed by:* Equipe MIASTO: Michel Lefebvre, Jan Karczewski and Witold Zandfos, 1970)

[30] *Archology (Architecture + Ecology)*: The arcology concept proposes a highly integrated and compact three-dimensional urban form that is the opposite of urban sprawl with its inherently wasteful consumption of land, energy and time, tending to isolate people from each other and the community. (*Designed by:* Paolo Soleri / 1960-69)

[31] *Project for Tel Aviv*: Inspired by the city's new traffic arrangements, the project involves an extension and a man-made island. The island is connected to the land with a direct pedestrian road and a winding highway. The most memorable part of the project is its massive, saddle-shaped structures. (*Designed by:* Ja Lubicz-Nicz ve Carlo Pellicia / 1963)

[32] *Bus City (Cité Autobus)*: Aiming to transport large-scale industrialization to architecture, this project makes a unique suggestion: Using buses like caravans and allowing people to spend their spare times in different ways. (*Designed by:* Guy Rottier / 1966)

[33] *"Mesa City" Ideal City Project*: A line-like 10 km wide and 30 km long urban project located on the banks of a river and housing a total of 2 million inhabitants. The project

Situations they resist:
Another area to examine these projects is the situations they resist: While *Slum-clearance Scheme for Harlem, New York City*[34] developed an urban project by resisting the slums in cities and emphasizing the need for clarification in these areas (Fuller & Sadao, 1972), the main concern of *Urban Residences and their Connective Systems*[35] is to reestablish family ties which have begun to fade (Akiyama, 1972).

Sources of inspiration:
One of the most commonly wondered aspects of these sketches of utopia based on the idea of designing an ideal living space from scratch is their sources of inspiration: while *Ideas Circus*[36] uses its source of inspiration, circuses, to offer a lively and fickle lifestyle similar to that of a circus (Cook, 1968), *New Babylon*[37] offers a city hanging in webs in the air referring to its source of inspiration, spiders (Constant, 1962), (Constant, 1971).

This list, which was prepared only to draw a general framework and give general information about the background of the game/education model to be designed and the width of the game area, was based on a few projects from the history of architectural utopias. These examples may help us

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consists of various cities and 34 villages, each of which houses 3,000 people. (*Designed by:* Paolo Soleri / 1958 - 1967)

[34] *Slum-clearance Scheme for Harlem, New York City*: A joint project by Richard Buckminster Fuller and Shoji Sadao, aimed to erect giant buildings instead of slums. In order to change the social and architectural identity of Harlem, the plan envisions a giant building in a pre-planned area and people living in this huge structure. Later when abandoned, this area will be transformed into parks or various public areas. (*Designed by:* Richard Buckminster Fuller and Shoji Sadao / 1965)

[35] *Urban Residences and their Connective Systems*: Consisting of residential towers, which look more like oil refineries than apartment buildings that are composed of residential sections stacked one above the other, the project is designed by the concept of preventing the loosenning of family ties, which has become such a marked feature of the industrial civilization. (*Designed by:* Tetsuya Akiyama, Iwao Kawakami, Norio Sato, Yuji Shiraishi and Yoshiaki Koyama /1966)

[36] *Ideas Circus*: A travelling project which can be installed and dismantled easily. It aims to establish a travelling campus and bring people together with methods which are thought to constitute the education system of the future. (*Designed by:* Archigram (Peter Cook) / 1967)

[37] *New Babylon*: The main concern of the project which does not offer enough detail can be summarized as such: A multi-layered suspending platform independent of the earth, and the search for a space where various spatial arrangements will be possible. (*Designed by:* Constant / 1960)

glance at different parts of the utopian culture or assume another function: Just like in the popular children's game, the dots that are connected with lines may shock us by yielding a drawing that is impossible to guess beforehand. New dots may be added to these every time and a more playful design process may be obtained.

A game/design attempt:
"Feeling the Blanks" / "Feel in the Blanks"
Starting from the milestones of the utopian design culture, we may produce the sketch of an educational model to be used in enriching the imagination of design students and architectural design processes. With randomly selected combinations of different design criteria, experimental models with blanks may be formed. Due to the nature of design which proceeds in limitations, the characteristics shaping the imaginary projects – some of which have been listed above to give an idea – may be taken as the first limitations to be used in the design process. The game/design may be enriched with the help of new and flexible design input – which will encourage students to pour their personal resources into the design – such as student perceptions of today's architecture, their thoughts on urban culture, their evaluations of people's changing lifestyles, their understanding of the newly defined human-nature relationships, and how their imagination is affected by the developing technology.
Or instead of starting a game from scratch based on these imaginary projects, the offers for ideal living spaces may be included in the designs made in project studios: They may find a place for themselves in a gap or "blank" that has not been filled in a design and thus become a source of inspiration for a solution.

The most important characteristic of utopias is that they wet one's appetite. Voicing potential future situations that may await humanity creates new areas in minds that can only extend through imagination. Utopias make people yearn for the future and thus shape the unknown future. At the heart of design is thinking for the future. In the design process that continuously searches for what has not been imagined before, "excess imagination" does not exist. Even if these projects, which at their worst may be a cause for spending extra time in an imaginary world, may not be of direct use in design studios, they may still help us see what the design should not be and eliminate certain question marks. The elimination of such doubts is the biggest step for designers in reaching solutions during the design process which is naturally hazy.
Particularly in today's architecture environment, which stands closer to answers than question marks, what could be more useful for an alternative educational model than a dreamy and excited question mark "?"

REFERENCES

Akiyama, T. (1972) Design for the Competition held in 1966 under the auspices of the magazine The Japan Architect: “Urban Residences and their Connective Systems”, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 80-81

Anger, R., Braslavsky, P., Heymann, M. (1965) *Projet pour la cité d’auroville en Inde*, L’architecture d’aujourd’hui, 125, pp. -

Archigram (1969) *Instant City / Une imagerie de vie urbaine a la campagne*, L’architecture d’aujourd’hui, 146, pp. 82-83

Chanéac (1964), *Étude pour des “Villes Cratéres”*, L’architecture d’aujourd’hui, no. 115, pp. 42

Chanéac (1972), *Cellules Polyvalentes (Multi-Functional Cells),* in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 60-61

Chanéac (1972) *Crater City*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 152-153

Constant, N. (1962) *Neo-Babylone*, L’architecture d’aujourd’hui, 104, pp. 77

Constant, N. (1971) *New Babylon*, in: U. Conrads (ed.) *Programs and Manifestos on 20th-century Architecture*, The MIT Press, Cambridge, Massachusetts, pp. 177-178

Cook, P. (1967) *Archigram groupe*, L’architecture d’aujourd’hui, 133, pp. -

Cook, P. (1968) *Ideas circus*, L’architecture d’aujourd’hui, 139, 59

Cook, P. (1972) *Plug-in City*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 70-71

Corbusier, L. (1986) *Towards a New Architecture*, Dover Publications, New York, pp. 83

Dahinden, J. (1972) *Trigonic Spatial Cells*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 48-51

Debord, G. (1995) *The Society of the Spectacle*, Trans: Donald Nicholson-Smith, Zone Books, Cambridge, pp. 127-128

Drew, P. (1972) *Third Generation / The Changing Meaning of Architecture*, Pall Mall Press, London, pp. 102-113

Friedman, Y. (1962) *Paris spatial*, L’architecture d’aujourd’hui, no.101, pp. XXXVII

Friedman, Y. (1972) *Dare to Live*, in: J. Dahinden (ed.) *Urban Structures For the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 197-199

Friedman, Y. (1960-61) *Les agglomérations spatiales*, L’architecture d’aujourd’hui, 93, pp. XLVIII

Friedman, Y. (1963) *Vers un urbanisme tridimensionnel*, L'architecture d'aujourd'hui, 102, pp. 76-77
Fuller, R. B. & Sadao, S. (1972) *Urban Slum-Clearence Scheme for Harlem New York City* in: J. Dahinden (ed.) *Urban Structures For the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 164-165
Gaillard, M. (1964) *Paul Maymont, le fantastique concrétisé*, L'architecture d'aujourd'hui, 115, pp. 30-34
Greene, D. (1972) *Girder Building*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 110-111
Isozaki A. (1972) *Cluster in the Air*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 72-73
Isozaki, A. (1965) *Manhattan projet*, L'architecture d'aujourd'hui, no.117, pp. XXV
Jonas, W. (1972) *Intrapolis (Funnel Town)* in: J. Dahinden (ed.) *Urban Structures For the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 150-151
Jungmann, J.-P. (1972) *Dyodon*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 108-109
Karatani, K. (1995) *Architecture as Metaphor: Language, Number, Money*, MIT Press, Cambridge, 133-135
Katavolos, W. (1962) *Architecture Chimique*, L'architecture d'aujourd'hui, pp. 104, 21
Katavolos, W. (1971) *Organics*, in: U. Conrads (ed.) Programs and Manifestos on 20th-century Architecture, The MIT Press, Cambridge, Massachusetts, pp. 163-164
Kikutake, K. (1972), *Unabara (Floating Industrial City)*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 122-123
Kurokawa, N. (1962) *Propositions d'urbanisme au Japon*, L'architecture d'aujourd'hui, no.101, pp. 84-87
Kurokawa, N. (1972) *Town Plan For Tokyo,* in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 74-75
Lefebvre, M., Karczewski, J. & Zandfos, W., (1972), *Leisure City Kiryat Ono*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, 170-175
Lubicz-Nicz, J. & Pellicia, C. (1964) *Concours pour Tel-Aviv-Yafo*, L'architecture d'aujourd'hui, no.115, pp. 62
Lubicz-Nicz, J. & Pellicia, C. (1972), *Project for Tel Aviv*, in: J. Dahinden (ed.) *Urban Structures For the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 142-143

Maymont, P. (1972) *Earthquake-resistant Floating Towns*, in: J. Dahinden (ed.) *Urban Structures For the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 128-129
More, T. (1834) *Utopia: And History of King Richard III*, Trans: Gilbert Burnet, Hilliard-Gray, pp. 67
Otto, F., Bubner, E. & Tange, K. (1972) *Arctic Town*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 117-119
Owen, R. (1948) *A new view of society*, Free Press, New York, 15
Rottier, G. (1966) *Cité autobus*, L'architecture d'aujourd'hui, -, 62
Soleri, P. (1968) *Projet de ville idéale "Mesa City"*, L'architecture d'aujourd'hui, 104, pp. 72-77
Soleri, P. (1968) *Asteromo*, L'architecture d'aujourd'hui, 146, 81
Soleri, P. (1968) *Novanoah B*, L'architecture d'aujourd'hui, 146, pp. 80
Soleri, P. (1968) *Projet Babel II B*, L'architecture d'aujourd'hui, 139, pp. 71-72
Soleri, P. (1972) *Arcology*, in: J. Dahinden (ed.) *Urban Structures for the Future*, G. Onn (trans. by), Praeger Publishers, New York, pp. 178-183
Suits, B. (2005) *The Grasshopper: Games, Life and Utopia*, Broadview Press, New York, pp. 154-155

THE EFFECT OF TEACHING THE BASIC CONCEPTS ON THE FIRST YEAR ARCHITECTURAL EDUCATION: ANALYSIS OF AN EXERCISE IN BUILDING SCIENCE COURSE

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ABSTRACT

Keywords: *Knowledge, Architectural Education, Architectural Concepts, Learning Systems, Building Science*

Knowledge is the phenomenon of reproduction of the relations in the changing environment at the intellectual level. It appears during the action of human brain, and acquire by learning, research or observation. Presentation of knowledge to the person who learns for a specific purpose, for a specific case accelerates the process of learning action. It should be researched how a learning system that is motivating, allows active participation, use of initiative and keeps the interest of the learners alive should be for an efficient learning process.

The profession of architecture contributes to the social, cultural and economic development of the societies. The knowledge conveyed while educating a student of architecture is combined with design ability and integrating skills and plays an active role in the formation of built environment. The basis of architectural education is formed by learning the concepts that constitute the ground of this education. The subjects of how the knowledge belonging to architecture concepts will be conveyed and what the learning types can be are frequently discussed within the framework of architectural education.

Knowledge groups belonging to the basic concepts that should be conveyed in architectural education come into prominence as building, construction and design. In building design, the place of cultural environment, physical environment and technological environment factors and considering the design of the buildings in accordance with these factors constitute the building knowledge group.

The knowledge belonging to the architectural concepts may be conveyed by question, hypothesis, analogy, simulation, explanation etc. For example, informing by analogy and simulation is a method which is used frequently. Thus, informing is realized by making use of visual references. Within this context, an exercise was conducted in 2007-2008 fall semester in YTU Department of Architecture Building Science 1 course in order to test the effectiveness of learning systems that may increase the motivation and accelerate the process of being informed.

Building Science 1 is a compulsory course in 1^{st} year 1^{st} semester. “Dwelling” where an individual spends most of his/her life constitutes the sample area of this course, and the transfer of knowledge related to how a

dwelling should be arranged in accordance with its function constitutes the main fiction of the course. Teaching forms applied in this course can be sorted as research, seminar and exercise.

An exercise has been made in order to examine the effects of the foreknowledge or being taught of the concepts constituting the components of a whole on the process of being informed. 25 students participated in this study, and a plan drawing of a bedroom at the size of 4 x 3 m. and the plan schemes of the basic equipment made of carton that should be included in this room were distributed to the students. A period of 10 minutes was given in the first stage, and the students were asked to consider this room as their own bedroom and to arrange accordingly. No information was given to the students before the exercise. Before to 2nd stage, some basic information was given to the students related to the bedroom arrangement and passing they were asked to re-arrange the same room.

The aims of the study can be listed as follows:

- To discover whether the process of being informed has been realized or not by examining the approach before giving any information and the approach after giving some basic information,
- To understand the knowledge level of Architecture 1st year students related to their own personal spaces they always use, and to determine the studies to be conducted in the course accordingly.

Introduction

Learning is one of the most important individual activities that occurs in a particular period of human life, as in formal educational organizations or informal educational organizations.

Learning style is factors set which defines how an individual perceive, communicate with and react to the environment (Şimşek, 2001). Variables of learning preferences are classified as follows:

a) Perceptual preferences/choices and difficulties
b) Motivational differences
c) Psychological factors
d) Information processing practices: How does individual process information? The way that is preferred by individuals to perceive and process the information differs from one person to other person. While some person has the ability to learn math models and theories easily, rest learns easily schemata and graphical expressions.

Variables of learning preferences form learning styles. It is possible to find four major models on learning styles in the literature. These are The Myers-Brigss Type Indicator (MBTI), Hertmann Brain Dominance Instrument (HBDI), Felder-Silverman Learning Style Model and Experiential Learning Theory (ELT) (Felder, 1996). Kolb's (1984) ELT is widely accepted and generalized models and it has frequently been studied on researches of design disciplines related with learning styles and preferences. Recent studies made by Demirbaş, Demirkan (2003), Kvan, Yunyan (2005), Demirbaş, Demirkan (2007), Demirkan, Demirbaş (2008-article in press) can be given as examples.

ELT suggests that learning is a circular process. This cycle begins with experience, continues with reflection and finishes an action that reflection becomes a concrete experience. In the Experiential Learning Theory (ELT), there are four phases, namely Concrete Experience (CE), Reflective Observation (RO), Abstract Conceptualization (AC) and Active Experimentation (AE). Learning methods in the stages of the cycle differ from each other. In Concrete Experience (CE) phase learners prefer to learn by experiencing and in Reflective Observation (RO) learners have the tendency to learn by reflecting. In Abstract Conceptualization (AC) learn by thinking through the analysis of ideas is the preferred learning style and in Active Experimentation (AE) learn by doing through active experimentation is chosen by learners (Kolb, 1984; Aşkar, Akkoyunlu, 1993).

The major phases that occur in the learning cycle of an architectural student are stated as Concrete Experience (CE) and Abstract Conceptualization (AC). In Concrete Experience (CE), learning from feelings and specific experiences has been seen. Instructor has an assistant and a guide position in this phase. Features such as learning by thinking, analysis, systematical planning, and deduction are important in Abstract Conceptualization (AC) phase. Instructor is the person who transfers the knowledge to the students in AC phase.

This paper is focused on "how can architectural students who are in the first year of their education combine concrete experiences with new knowledge gathered in the courses?" To achieve this goal an exercise is set.

Definition of the problem; the scope and aim of the study

Building Science 1 is a compulsory course in Yildiz Technical University Faculty of Architecture Department of Architecture. The course consists of 3 hours study, 1 for theoretical knowledge and 2 hours for practice. The course is continuing in forthcoming semesters as Building Science 2-3 and 4 with the scope of various themes in building science. The main theme of Building Science 1 is "House" and human dimensions, man-environment relations, user requirements, architectural planning process and architectural concepts are additional subjects.

House is handled with the sub subjects of house and culture such as life in house, activities, activity areas, activity types, postures, furniture, furniture-activity relations and the close environment of house. In this context, to determine the proper furniture's according to the fundamental and partial functions and organize these in a space forms the main aim of the course. This aim is realized through theoretical and practical studies. However, the process of being informed is not working in one way that is a flow only from instructor to students. To achieve interactivity in the course, the students are asked to prepare researches and express them whether written-verbal or visual format and share their knowledge with entire class. So, it could be possible to observe how the students interpret new knowledge that they gathered from theoretical and practical information in the course with the foreknowledge already learned by experiences about the most known function of their lives; "house life". The teaching style is formulated on induction approach; firstly the house is divided and studied partially and at the last stage the parts come together and form whole house. The parts are determined according to the fundamental functions; (Table 1.)

-living spaces/common spaces (living room, dining room, family room, study room etc.)
-service spaces (kitchen, garage, lavatory, storage, cloakroom etc.)
-private spaces (master bedroom, kids rooms, bathroom, etc.).

The teaching style of Building Science 1 is being formed after searching the program of similar architectural schools and courses and also the master-apprentice relations. In the process of revision of the program of the course a question is appeared; “could different teaching methods be effective on learning styles of the students?” and if so, “how should the revision be and what could the share of the ratio of the theoretical and practical knowledge be?”

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The aim of this study is to test how the process of being informed is working. How do the previous knowledge (concrete experience) and newly acquired knowledge combine to form operational knowledge that could orient the practical study? And also, the interpretation of previous knowledge and new knowledge will lead a path to active learning of “House” that students already had experienced and will improve the knowledge on the subject.

FUNDAMENTAL FUNCTION	FUNDAMENTAL FUNCTION	FUNDAMENTAL FUNCTION
1.LIVING FUNCTION	2. PRIVATE FUNCTION	3.SERVICE FUNCTION
• Open to outside • Common usage	• Close to outside • Private usage	• Service areas
PARTIAL FUNCTIONS	PARTIAL FUNCTIONS	PARTIAL FUNCTIONS
• sitting	• master bedroom	• kitchen
• eating	• children’s bedroom	• lavatory
• terrace and balconies	• bathroom	• entrance, cellar, garage, storage servant’s room, laundry etc.
SINGULAR FUNCTIONS	ACTIONS	EQUIPMENTS

• **sitting** sitting, chat/talk, listening music, watching TV, playing, reading, coach, coffee table, book shelves etc.	• **master bedroom** bed, bedside table, dressing table, mirror, chiffonier, wardrobe etc., dressing-taking off, working, sitting, sleeping.	• **entrance** entering-going out, shoe cupboard, umbrella stand, phone etc.
• **eating** eating, buffet/sideboard, eating table, chair, terrace, balcony, sitting, breakfast, sunbathing.	• **children's bedroom** sleeping, playing, working, sitting, bed, bedside table, wardrobe, dressing-taking off.	• **toilet** excretion, closet, washing hands, sink
	• **bathroom** heating, storing, doing laundry/do the washing, washing, bathtub, closet, shower, washing machine	• **kitchen** storage, cellar, preparing, washing, cooking, workbench, cupboard, oven, kitchen sink , fridge

Table 1. The fundamental and partial functions of the house used in the exercises (Kıran, Polatoglu Baytin, 2006).

Method of the study

25 first year students were chosen randomly as subject group from 2007-2008 fall term in YTU Department of Architecture Building Science 1 course. They were 19 female, 6 male students who attended the 1st. lesson of Building Science Course. The students were asked to consider the given room as their own bedroom and to arrange accordingly.

Why bedroom was chosen?

Bedroom, where an individual express himself/herself in a free manner, is the most private space in a house. Although the bedroom mostly shared with a relative in Turkish family constitution, it is still a place that an individual could stay oneself. Since bedroom is one of the most important spaces in the houses of every culture, it was chosen for the subject of the study. How the

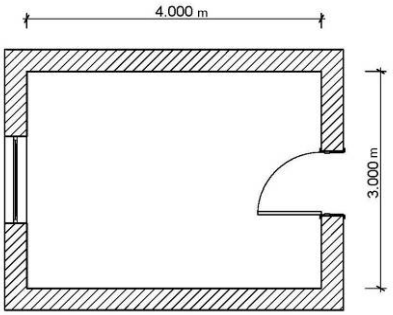

Figure 1. The given bedroom plan as architectural stimulant

students organize their bedrooms wer y. Eventually the study is not only emphasized the relation between

foreknowledge and acquired knowledge but also forms a preliminary framework for future studies on the preferences and arrangements of Turkish youth in their bedrooms. In the study, a plan drawing of a bedroom at the optimum size of 3.00 x 4.00 m. were given the students with basic furniture/equipments as bed, bedside table, wardrobe, desk and work chair (Figure 1).

The Drawings of Bedroom and Basic Furniture

In Turkish education system, there aren't any steps that orient students to consciously profession selection. All candidates have to be successful at the University Entrance Exam to enter universities of Turkey. As a consequence, only a few students could make proper selection and it is almost impossible to know the educational background of students. It seemed very risky to give the students an architectural drawing from the first day of their official architectural education. However, the students are familiar to plan drawing, top view of an object from pre-university period's lessons such as geography, painting. For this reason, it was decided to give the plan of the bedroom and the top view of furniture's. The students also informed about the scale of all drawings that is 1/50. The plan drawing was arranged on an A4 paper and the furniture's cut down form beige cartoon to create a figure-ground relation (Figure 2.).

Exercise

25 first year (freshman) students who were in the first lesson of Building Science 1 course participated in the study. The study consisted of three parts which took 30 minutes in total.

1st.Phase:

A period of 10 minutes was given in the first phase, and the students were asked to consider the given room as their own bedroom and to arrange this room with the given furniture (5 pieces). No information was given to the students before the exercise.

Information Process:

The students were informed about general rules of arranging a bedroom; size, access, spatial organizations etc. The time period of the information process was also 10 minutes.

2nd. Phase:

In the second phase, the students were asked to re-arrange the same room with same furniture within 10 minutes.

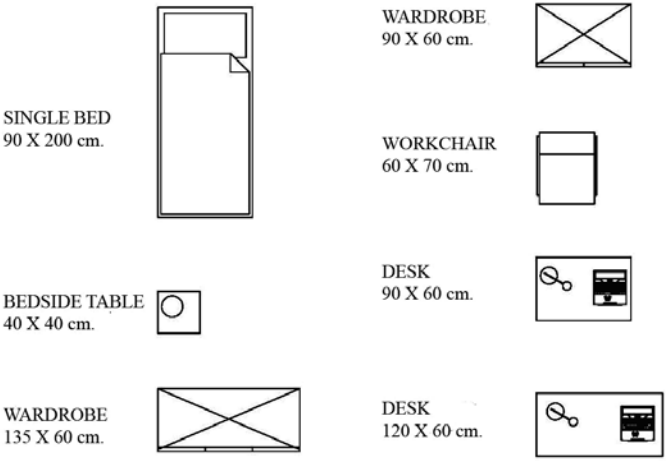

Figure 2. The given furniture

Data analysis

The results of the study were evaluated from the answers (arrangements) of 25 students who participated the exercise. The analyses of arrangements were evaluated in 3 criteria; spatial organization, visual relations, accessibility (Table 2).
A score for each criterion were given to each subjects at the end of the evaluation process. Suitable-unsuitable, present-absent and yes-no phrases were used for the evaluation of each criterion. Positive solutions scored (1), while negative solutions scored (0). Table 3 indicates the total scores of all subjects (students) for each criterion in 1st. phase and 2nd. phase.

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1.Spatial Organization	2.Visaul Relations	3.Accessibility
Location of the bed	Vision from door to bed	Access to bed from door
Location of the wardrobe	Vision from door to wardrobe	Access to wardrobe from door
Location of desk	Vision from door to desk	Access to desk from door
Location of work chair	Vision from door to work chair	Access to work chair from door
Location of bedside table	Vision from door to bedside table	Access to bedside table from door
	Vision from window to bed	Access to desk from bed
	Vision from window to wardrobe	Access to wardrobe from bed
	Vision from window to desk	Access to desk from wardrobe
	Vision from window to work chair	Access to bedside table from bed
	Vision from window to bedside table	

Table 2. The criteria of analysis of bedroom organization

SUBJECT NO	CRITERIA OF ANALYSIS	1. PHASE	2. PHASE		SUBJECT NO	CRITERIA OF ANALYSIS	1. PHASE	2. PHASE
1	Spatial Organization	3	3		13	Spatial Organization	1	1
	Visual Relations	8	6			Visual Relations	6	6
	Accessibility	5	5			Accessibility	8	9
	Total Scores	**16**	**14**			**Total Scores**	**15**	**16**
2	Spatial Organization	4	3		14	Spatial Organization	1	3
	Visual Relations	7	6			Visual Relations	2	7
	Accessibility	6	4			Accessibility	5	6
	Total Scores	**17**	**13**			**Total Scores**	**8**	**16**
3	Spatial Organization	1	5		15	Spatial Organization	0	5
	Visual Relations	5	8			Visual Relations	1	9
	Accessibility	6	7			Accessibility	7	7
	Total Scores	**12**	**20**			**Total Scores**	**8**	**21**

Table 3. The total scores of subjects (students) for each phase

SUBJECT NO	CRITERIA OF ANALYSIS	1. PHASE	2. PHASE		SUBJECT NO	CRITERIA OF ANALYSIS	1. PHASE	2. PHASE
4	Spatial Organization	1	2		16	Spatial Organization	3	2
	Visual Relations	5	7			Visual Relations	10	6
	Accessibility	4	5			Accessibility	7	7
	Total Scores	**10**	**14**			**Total Scores**	**20**	**15**
5	Spatial Organization	2	3		17	Spatial Organization	2	4
	Visual Relations	6	6			Visual Relations	6	7
	Accessibility	4	5			Accessibility	5	8
	Total Scores	**12**	**14**			**Total Scores**	**13**	**19**
6	Spatial Organization				18	Spatial Organization	2	5
	Visual Relations	5	3			Visual Relations	7	10
	Accessibility	5	5			Accessibility	7	8
	Total Scores	**12**	**10**			**Total Scores**	**16**	**23**
7	Spatial Organization	3	4		19	Spatial Organization	3	5
	Visual Relations	5	9			Visual Relations	7	10
	Accessibility	5	6			Accessibility	7	9
	Total Scores	**13**	**19**			**Total Scores**	**17**	**24**
8	Spatial Organization	1	3		20	Spatial Organization	1	3
	Visual Relations	5	9			Visual Relations	4	8
	Accessibility	6	7			Accessibility	7	7
	Total Scores	**12**	**19**			**Total Scores**	**12**	**18**
9	Spatial Organization	1	2		21	Spatial Organization	1	3
	Visual Relations	5	3			Visual Relations	7	9
	Accessibility	6	8			Accessibility	8	6
	Total Scores	**12**	**13**			**Total Scores**	**16**	**18**
10	Spatial Organization	4	3		22	Spatial Organization	2	3
	Visual Relations	2	6			Visual Relations	5	7
	Accessibility	5	7			Accessibility	8	7
	Total Scores	**11**	**16**			**Total Scores**	**15**	**17**
11	Spatial Organization	0	2		23	Spatial Organization	1	3
	Visual Relations	3	7			Visual Relations	5	8
	Accessibility	6	7			Accessibility	7	8
	Total Scores	**9**	**16**			**Total Scores**	**13**	**19**
12	Spatial Organization	0	5		24	Spatial Organization	0	5
	Visual Relations	3	10			Visual Relations	6	9
	Accessibility	7	7			Accessibility	7	9
	Total Scores	**10**	**22**			**Total Scores**	**13**	**23**
					25	Spatial Organization	4	4
						Visual Relations	9	9
						Accessibility	6	6
						Total Scores	**19**	**19**

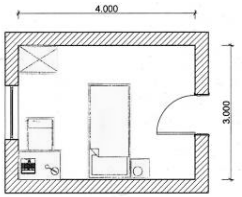
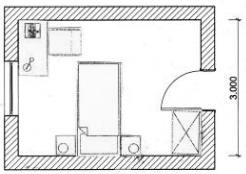
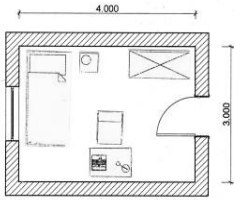
Discussion

Findings on research hypothesis

1. The relation between the foreknowledge and acquired knowledge

- In the 1st. phase the scores are differentiated among 8-20 and the scores of 2nd. phase are among 10-24.

- There is a largely positive relation between first phase and second phase. 18 of subjects are seen progress for each 3 criterion that means positive relations (Figure 3). There is no progress in the organization of 4 subjects for each 3 criterion that defines negative relations. 3 of subjects have neutral relations; there is no either progress or decline in their arrangements (Figure 4).

Subject 3	Subject 7	Subject 12
		
1st.phase		

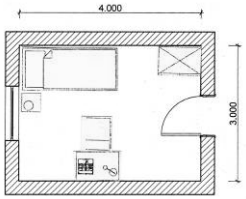
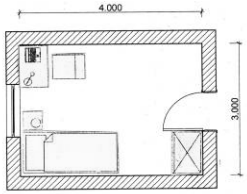
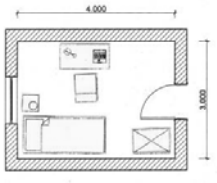
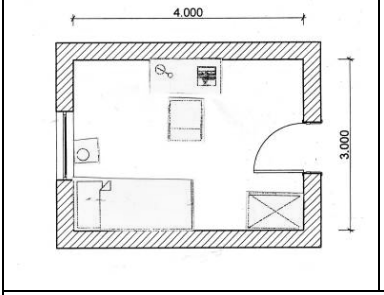
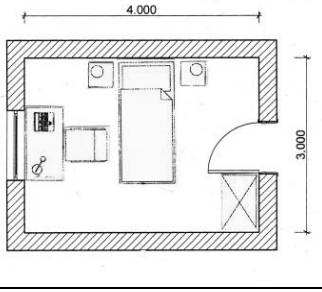
Subject 3	Subject 7	Subject 12
		
2nd. phase		

Figure 3. Subject 3, 7 and 12 are the examples of positive relations found in arrangements.

Subject 1	Subject 25
	
1st.phase	

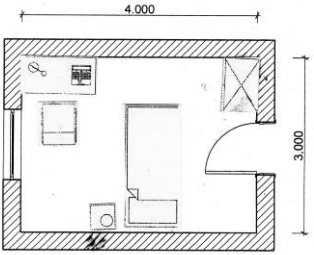
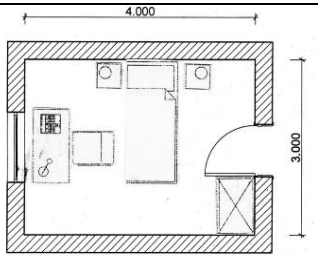
Subject 1	Subject 25
	
2nd.phase	

Figure 4. Subject 1 is the example of negative relations and Subject 25 is the example of neutral relations found in arrangements.

2. Information process is realized

- After information process, it is observed that in all groups the scores of the arrangements improved. Spatial organizations increased 5 points, visual relations increased 7 points and accessibility increased 1 point.

As a consequence it could be said that informative process especially was effective on spatial organization and visual relations. There isn't any distinctive effect on accessibility, the reason lays under the importance of this concept in house beside other features.

Conclusion

The findings of the study showed that the process of being informed has been realized gradually. It is also concluded that new knowledge is acquired after information process. The higher rate of the positive relations can give as evidence to support this conclusion.

Although there is no significant evidence about the learning styles of subjects in this empirical study, it is assumed that learning styles of them differ from each other. It is also possible to say that subjects who have positive relations should be better learner and they are also good to associate different learning styles.

The acquired framework of this research could be adapted the studies to be conducted in Building Science 1 course accordingly. The previous knowledge (concrete experience) and newly acquired knowledge of subjects about house design could be combined to form new operational knowledge. This knowledge should use to reach a learning system that is motivating, allows active participation, use of initiative and keeps the interest of the learners alive in Building Science 1 course. For the next step of this research, to design a completely new room should be asked the students as an example to see how they use their new operational knowledge.

For further studies, the process of being informed might be analyzed for the specific parts of architectural education such as building, construction and design. Beside, how the learning styles of architectural students affect the information process is another important point might be searched.

References

Aşkar, P and Akkoyunlu, B (1993), *Kolb Öğrenme Stili Envanteri (Kolb's Learning Style Inventory),* Eğitim ve Bilim, No.87, pp. 37-47. (Turkish).

Demirbaş, O O and Demirkan, H (2003), *Focus on Architectural Design Process through Learning Styles,* Design Studies, Vol. 24, pp.437-456.

Demirbaş, O O and Demirkan, H (2007), *Learning Styles of Design Students and the Relationship of Academic Performance and Gender in Design Education,* Learning and Instruction, Vol.17, pp. 345-359.

Demirkan, H and Demirbaş, O O (2008), *Focus on the Learning Styles of Freshman Design Students,* Design Studies (2008), doi:10.1016/j.destud.2008.01.002 (article in press).

Felder, R M (1996), *Matters of Style,* ASEE Prism, Vol.6, No. 4, pp.18-23.

Kıran, A and Polatoğlu Baytin, Ç (2006), Bina Bilgisine Giriş (Introduction to Building Science), 2. Baskı, YTÜ Yayınları, İstanbul, Türkiye (Turkish).

Kolb, D A (1984), *Experential Learning: Experience as the Source of Learning and Development,* Englewood Cliffs: NJ, Prentice Hall, USA.

Kvan, T and Yunyan, J (2005), *Students' Learning Styles and Their Correlation with Performance in Architectural Design Studio,* Design Studies, Vol.26, pp. 19-34.

Şimşek, N (2001), *Öğretim Teknolojilerinin Özellikleri ve Kullanımı (The Features and Usage of Learning Technologies)*, Öğretim Teknolojileri Kullanımı Kursu Ders Notları, Emniyet Genel Müdürlüğü Basımevi, Ankara, Türkiye (Turkish).

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ABSTRACT

This study focuses on a method in which knowledge of design is produced by creative drama-game. One can learn various behaviors via playing games. In the course of game we know our environment and things taking place in this environment as much as ourselves. A person knowing himself can open himself to the outer world. His relation with people and objects existing in this environment develops. As a result of these processes also his creativity increases. Such a person may aware of differences and similarities between himself and others, because he can observe and know himself and his environment much more perfectly. Performed improvisations provide higher self-confidence and increase experiences with other persons. In addition, it helps to think and to take decision independently, to take responsibility, to co-operate, to create social sensitivity, to obtain skill of better expression both verbally and behaviorally; that is to communication. Thus, creative drama-game contributes to the communication process in which person feels himself free to express, to interrogate and to proof reasons underlying his or her thoughts. If a system does not allow person to make his or her own synthesis in experience and neglects sensitive and intuitive aspect of learning then self-realization, that is designing becomes highly difficult for him. In this context, we have assume the idea that creative drama have a significant potential in terms of the process of designing-creating.

Key words: *Basic design education, creative drama, intuition-logic, empathy, creativity.*

Introduction

In terms of the architecture education, design studios take place in the focus of curriculum and they are the most complex and challenging part of it.
Environment of the education of architectural design must adopt a sceptical and critical perspective and it must be open and tolerant to different ideas. Naturally it is expected from the architectural design studios to allow such an environment, since studios are places in which a whole created by inseparable parts and its qualities are experienced together by intuition, understanding and seeing by the eyes of mind (Arıdağ, 2005)**.**
Today it is known that studios are not completely a simulation of an office environment. In addition, they are under the influence of perfectness, weakness and activities of tutors. Prestigious schools of architect compete with each other in order to add famous architects to their system. On the other hand, some approaches who adopt to carry out design education by conveying professional experiences of practice, prevail as well. Tutors must perform academic studies, if they can find opportunity, obtain professional experience and on the other hand conduct the studio. However, it is observed that in the studio of those conductors who by going beyond their profession, discriminate the difference between performing and teaching the architectural design, there are innovation, advance and development. It has been seen that design experience of the tutor is a necessary condition but it is not a sufficient one in terms of architectural design education, because in a studio, the aim of a design activity is not a good design product but the candidate of architect himself with all his or her personal features. Thus in this case the problem is not only to design but also to acquire a behavior through designing. In this sense, such questions as "what is design education, how it is given and how it ought to be given?" become more important in the universities (Arıdağ, 2006).

Design Studio

Students of a design studio expect not only to take a number of concepts and ideas but also to carry out at least two tasks performed simultaneously, which are designing and learning how to make a design. In addition, student must introduce and defend some ideas, establish personal relations with friends and tutor and learn new techniques and skills (Sachs, 1999). Indeed, contrary to what is believed, architects are educated intuitively[38]

[38] ... There is no formulation of thinking or programs of reasoning that allows to reach from empiric observation to truth in a shortest way. Between an observation and evaluation of it occurs always a function of brain. In science, creative predictions services to productivity. Routine deeds of science include common sense supported

similar to scientists and are encouraged to develop keen a power of observation and to see relations between things which are possibly neglected by other human beings (Linzey, 2001).

Powerful intuitions is very important in terms of science and engineering (Kolodner and Wills, 1996). A study carried out by Myers-Briggs's[39] personality test brought out importance of intuition (Sungur, 1997): In a group in which 75% of the overall sample chose the sensations perceived through five sense organs, 100 % of architects, 93 % of researchers, 90 % of writers has preferred intuition which requires holistic approach in order to solve a problem.

Uraz (1999) claims that the designing thought appears in two different form. First one is not detailed but rapid, holistic and has abundant alternatives, while second one is deliberate, refiner, directed to the parts and develops gradually. First group is set forth by Uraz as one which uses intuition, reveal memory and consciousness. Thus as a "playful and lighthearted element", it promotes creativity in the architectural design procees. He also claims that the second group, on the contrary of the first, represents serious, rational aspect of architectural design which is intended to solve problem. According to Uraz, it is impossible to make a successful design by insisting on only one aspect. He emphasizes that the search of methods which standardize the design process, are caused by the approaches insisting on only this serious aspect of design but neglecting its playful and lighthearted aspect. In this sense, Schön (1985) defines the design as a visual and linguistic play. This definition is based on the relation between educator and child: "A child learns not only by learning rules, for a learning educator and child must share a context or a play". In this case, how can we balance learning with a hard rationalist perspective and a way of learning stressing out experience more than first one?

Difficulty of an studio experience including intuition is caused by a condition in which knowledge produced by mind and by intuition exist side by side but they do not correspond or overlap simultaneously. Indeed, rational knowledge which has unchangeable bases, sustains intuitive

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with a strong understanding. It doesn't require deeper and more special inference than our daily inferences. But it is necessary to understand the results that may occur and to notice differences. In addition, it requires a power of will which can resist to the attraction of a hypothesis and which will not deceived by a experience that is carried out inappropriately (Medawar, 1973).

[39] Myers-Brigs is an instrument developed according to Jung's personality theory. It is grounded on his assumption that intuition and sensation is present in each and every individual. The other assumptions underlying the test are the assumption that intuition ability, unlike smelling ability, can be acquired by working and practice (Sungur, 1997, pp 76).

knowledge which is obtained by intuition and changes in accordance with the context. (Aydınlı, 2001). Thus, in the course of studio education, it is impossible to talk about a standardized teaching which is applied by conventional approaches.

In addition, it may be said that, in terms of making the design scientific, some modern architectural movements which desire to define the architectural product and to control design and designer in the course of reaching such a product exert an influence. Here one can see the desire of modern movement for forming the products as based on objectivity and rationality like art and science. The main reason for this approach is the prestige of science. In order to clarify the relation between science and design, Cross (2001) discusses three different interpretations and claims that scientific design, design science and a science of design are different things. He states that design science proposes a systematic approach; meanwhile a scientific design leads to develop an understanding of design through scientific methods of research. This requires to use a mixture of intuitive and non-intuitive design methods which are based on scientific design introduced by scientific approach. These aspects of the design go beyond the limits of logical-based models. Hence, processes of the studio education can not be explained only by positivist doctrine on which the science of design is based. For understanding the fact of design and its education a general philosophy of life which is not only materialistic and positivistic but also can be agnostic and dualistic, is required (Findeli, 2001).

Hence, design studio, analogous to Dewey's (1939) definition of school, may be described as a place in which students acquire the habit of searching his way of behavior in life. In other words, it provides the habits of thinking for this purpose. As a versatile activity for finding this way of behavior, the design education is a different activity from the natural and social sciences, although it interacts with them. According to Cross (1982) design requires empathy, which is the difference of it from the rest.

Education of the skill of empathy has been discussed and searched since 1960's. It is set fort that the skill of empathy is a personal characteristic and that it can be acquired by education in a similar way that of the intuition. Skill of empathy can occur only by an increase of his self awareness, that is by his or her empathic relation for himself or herself. So it may be talk about a balanced relation of logic and intuition. As far as we know, empathy first appeared in the literature in the meaning of "aesthetic perception". Tunalı (1998) explains this concept as "conceiving objects in perception and experiencing them from inside in perception or introduction -Einführung, in Greek empatheia-. Today, in psychology, empathy is considered as a basic attitude and technique for therapeutic process. Feelings are considerably intense during a face to face relations. In

a certain sense, this is an interaction and a movement of two egos which are directed to one common target. Hence, it is natural for them to judge, to evaluate and to think each other. Naturally, in this condition, they judge and evaluate each other and also each one has ideas about other. This condition which is observed by Rogers (1983) and the blockage on the way of an effective communication can be removed only by a tendency of understanding instead of evaluation. According to Özbay and Şahin (1996), this sensitive understanding/affective perception or empathy, in addition to the psychological counseling, proves its validity and utility for all occupation fields which service to human beings and normal human relations and to couples. In various fields, establishing empathic relation is regarded as a necessary process for a healthy interaction (Dökmen, 1988).

By a quotation from Barrett and Lennard (1962), Rogers (1975), pp: 108) describes the empathic understanding functionally as follows:

"To perceive a person's meanings and communication, to transform his signs and words into experienced meaning is an active process in which one feels a "consciousness" behind a person's exterior communication".

As it may seen, in empathy, communication, intuition, perception, meaning and through them a conscious of the knowledge, that is condition of awareness of an individual are occur. Individual awareness, may be defined as giving meaning to the intuitions, in other words as using right-left hemispheres (intuition- logic) of the brain together in a balanced way. In the studio environment, during the interaction of tutor and student, it is not easy to codify every information. Codification and storage of an intuition which allows a student to understand a delicate problem is difficult in this condition. On the contrary, codification of information in official systems creates systems canceling themselves. At last, in the frame of data, student -designer- wants to obtain new rules and devices for design. Hence the objective of a design activity is providing new horizons to the designers as well as overcoming complications. In the studio design, as an activity constructed in the studio environment, sitting and waiting the motivation of our intuition makes no sense. Students and tutor need certain techniques which motivate intuitions consciously, provide much than a random insight and can be used systematically. Creative Drama is a very suitable method for this. Thus it was used in a basic design studio as a method. From now on methods of creative drama will be introduced and their use in Uludağ and Beykent Universities will be described.

Creative Drama

In order to understand better the relation between creative drama and empathy-intuition-creativity, it is necessary to understand what the drama is. In antique Greek "drama" means immediately "to live". In Greek "Dram" is

action and drama is a life style. Creative drama which is defined as a representation of a word, a concept, an action, a sentence, an idea or an experience or an event by using theatrical techniques and developing a play or plays includes various activities in order to reconstruct events, facts, experiences and knowledge (San, 1991). In addition to form theoretical aspect, the activities of creative drama which are based on dramatization, representation and improvisation are carried out in the frame of studio studies. Drama allows participants to discover and to know themselves, to know others and to "put oneself into another's shoes?" through transforming the sitations of life into creative process by using the element of "freedoom in the rules" which exists in play. Hence drama is a disciplin, a teaching methode and a field of the education of art (Üstündağ, 1994); it is an environment in which asociations, feelings, knowledges and experiences become free.

Creative drama which is used as a method for creating the skill of empathy which allows formation of creativity in 1st class basic design studios, plays a significant role by triggering a process which will uncover individual differences between students. Creative drama is a part of creativity and esthetic education, furthermore it is directed at socialization, learning and learning processes. Educational value of creative drama arises from its role through which students aware of their actions psychologically. While student assumes the personality of the character which is represented by him, he or she knows himself and others, learns his or her environment, uses his or her imagination and faculty of interpretation and stirs up his or her feelings and emotions. Creative drama strengthens communication. If the student is observed during a drama studies, it is observed that his or her language skills are highly active. As the student takes place in these activities he or she acquires skills of speaking, listening, telling and communication. All of them are gained as she or he naturally reacts to the inner or outer stimuli. By using the creative drama method in the 1st class basic design studios, we primarily aimed at teaching following perception, awareness, attitude, skill and behaviors to students:

- Students prepared to the design.
- By relaxing daily life from the daily life stress they focused on the design.
- They turned themselves and communicated with themselves psychologically so they could discover and aware of their creativity, in other words they disclosed or uncovered and developed their creativity.
- In addition this method supported their socialization skill.
- They could perform group studies.
- Each member of group stimulated creativity of others so that they produced creative products.

- They evaluated themselves realistically through the contribution of group dynamics and motivated themselves towards development and transformation.

Generally, application of the creative drama methods consists of four stages (San, 1996) and we did so as well. At first, students are prepared for a group study. Tutor bring them comfort and relaxation. Students meet each others and interact. They become wishful and ready for new experiences. In a creative drama trial which last two or three hours, one or more or all of the following stages are performed:

1. *Warming up and relaxing*: Students win confidence, adaptation, using five senses developing, faculty of observation, feeling the brain and body. This stages which are determined by highly rigid rules are conducted by tutor -ways of acquaintance, various walking and greetings etc.-.

2. *Playing (mime and acting a role)*: It consist of building a game freely within the determined rules and developing them. Particularly dimension of creativity and imagination is included in it -like 3 drip drops 2 booms-.

3. *Studies of improvisation*: It moves from a certain theme to the determined target. In these stages in which improvisation, creativity of a individual or group become much prominent, rules are less strict then previous ones -for example, rounded performance, representation of a space, expressing a name by using body-.

4. *Formations*: This process begins with a starting point which does not determined previously in any way. So the course and end of it is undetermined -for example finishing a statue, by creating an imaginative object and then conveying it to the other members of the group-.

Above mentioned studies, especially the warm up studies occur as follows:

- Knowing himself or her self -both psychologically and bodily-.
- Knowing other person -both psychologically and bodily-.
- Building -at first bilateral- mutual communication.
- Gradually going beyond the stage of bilateral communications and interactions to general communications.
- Creating a group dynamic.
- Rhetoric and interaction studies such as telling stories and memories.
- Passing the stage of play.

This studies which take place gradually, are followed by a stage of sharing and evaluation. Here the questions such as “What did you experience?”, What did you feel? “Where did you experience difficulty?”, “Where did you take pleasure” are asked to the students. This allows participants to express themselves in a group and to share their feelings and thoughts. In addition, their capacity of perception, awareness and consciousness is extended by the speeches of other individuals of the group. Thus they grasp deeply the importance of details which are not perceived or neglected and overlooked by them. Students make abstractions from this telling/sharing stage, partly

due to the intended questions and instructions of the leader of creative drama. So their skill of conceptualization and abstraction is developed in accordance with the perfect learning model of Bloom (1913) in which analyzing and synthesizing occur as well as emotional and cognitive learning. This can not be teach by any other methods as effective as this one. Especially in the improvisation and acting studies, there is a creative approach in which students shares the behaviors, thoughts, perception, the ways of seeing, sentiments, experiments and feelings of other persons and then criticize and evaluate them. This allows student to develop skill of criticizing, evaluating and also expressing them in a suitable language for communication. Recognition of the importance of all these, in terms of the architectural design education, changes depending on the comprehensions of the architectural design education.

Following these studies, students can use abstraction and conceptualizing skills which they acquired in the course of creative drama studies. Hence after the study, they passed to the theoretical part of the lessons which are arranged every week on a different theme, so that they can concretely relate these skills with architectural design and creativity. After this stage; that is after the creative drama activities, discussions about the architectural design which is called “conversations” are made by sitting on cushions placed in a circle.

Before a week, those text which will be discussed were given to the students. Then tutor demanded them to ask questions. And through these questions they began to discuss among themselves. He did not interfere in the discussions deliberately. When a theme was exhausted, the discussion was directed to an other one. Some of the themes are as follows:

- “On Architects with Fran Lebowitz”.
- “From two ways of Knowing” Edmund Blair Bolles.
- “Creative drama in the process of communication” Tülay Üstündağ.
- “How can they takes such Works?” Peter Eisenman Architects.
- “I am not Curious to new Technologies” Achille Castiglioni.
- “I am a Great Cook“ Gino Velle.
- “Mercury Fur” Philip Ridley -theatre-.
- “Art Belong an Order Which is not Rationalist” Françoise Choay.
- “Not a musician but a director “ Richard Rogers.
- “What was told by Steven Holl”.
- “I don’t want to bring back the old forms but old senses” Borek Sipek.
- “I did not try to be famous” Zaha Hadid.
- “Craftsmanship is a noble art” Enrico Baleri.

Conclusion and Proposals

Creativity demands a thinking which goes beyond the limits notices to the potential, sees parallels between very different activities and products,

transforms images into the productive ideas. Cooperation which is the base of creativity, requires an aim which is not limited with storage and makes available the information. On the contrary it gives motivation for focusing on the forms of relation with knowledge, for codification of it as language and for sharing what is known. Most of all, this means that students must be encouraged to create knowledge collectively which is the most important than the rest, since, in a sense, creativity means sharing what is known and learning in cooperation. Learning means administrating what is known as much as developing the skill by thinking in cooperation. Tutor must take students' learning forms into account and help them in the course of learning together in order to encourage their creativity in studio. Hence, the education of those who will be tutors in design studios, become an important point. This may require an education about the roles of communication .

Basic Design Studio which is arranged by the method of creative drama has following characteristics:

- Learning is spontaneous and creative.
- Studio is an environment in which problems are solved together.
- Tutor creates an emphatic environment.
- Tutor is completely honest and open. He conveys these honesty and openness to the student.
- Mind is free from all conditionings and is infinitive as well. Tutor cleans all conditionings from his and students mind.
- Studio is not a working place but it is rather an environment in which students is accepted to the culture of architecture. Very few students can meet completely his requirements in studio without experiencing difficulties and dilemmas. Process of design includes obstacles, uncertainties and as expressed "stuckness" which exists in the nature of this process. This environment allow students to understand and to solve this stuckness.

The use of creative drama method in Basic Design studios was first begun by the authors in Uludağ University in 2000 and was carried on in basic design studios of Uludağ University until 2006. After the transfer of the first author to Beykent University, in 2007-2008 fall season the method was also used in the Basic Design Studio. Some of the student views asked in the creative drama studies carried out in Beykent University is as follows. The contribution of the creative drama method to the students is clearly seen/understood in their expressions and their way of expression:

- I thing so the course of lesson is very well. At first, the warm up movements which we performed at the beginning of lesson are very perfect, that is they are amusing and also motivate us to lesson.
- Practices performed in the classroom are really pleasant. Each group is free to reflect its own mood. There is no limited theme. Persons

reflects amusingly their actions which whey want to do. For me it is very esthetic and amusing. Also in this way creativity of the persons increase and they know each other better. This lesson is not tedious. This is the most important part of it.

- Normally I don't like to appear too much among people, however expressing some thing as groups, as we did today, has been very amusing. I believe that every activity in this lesson is useful and that our creativity will be developed in such a way.
- They may seem simple things but for me it is not so. Also it is very pleasant. As if it relieved the stress of lesson and brought a place of entertainment.
- Every activity performed during the lesson makes me some contributions. These are not only related with lesson. Soul of a group, trying to do some thing as together and such kind of things can not find in any other lesson. In other lesson, we are not work as a group but completely individually. The most important part of the lesson is showing some thing to the people, producing some thing for them. For me these are very significant experiences.
- I felt that there is nothing that can not be done. I have felt that I forced the limits and accomplished to go beyond them. I felt that every members of the group is a pillar of it. One hand has noting but the two has a sound, I felt this sound.

References:

Arıdağ, L (2005), *Communication at Architectural Design Studio Education,* Ph.D. Thesis, Istanbul Technical University, Institute of Science and Technology, Istanbul.

Arıdağ, L (2006), *A Meta-Critical Approach to Architectural Design Education,* Architectural Education Forum 3: Global Architectural Education Area-GAEA, Istanbul Technical University Faculty of Architecture, Istanbul.

Aydınlı, S (2001), *Mimarlık eğitiminde değişen öncelikler,* Mimar.ist Mimarlık Kültürü Dergisi, No 1, pp 116-120.

Barrett-Lennard, G T (1962), *Dimensions of threrapist response as causal factors in therapeutic change,* Pyschological Monographs, No 43.

Blomm, B S (1979), *İnsan Nitelikleri ve Okulda Öğrenme,* çev: D. Ali Özçelik, M.E.B., Ankara (original: 1913, *Human Characteristics and School Learning*, McGraw-Hill Company, New York).

Cross, N (1982), *Designerly ways of knowing,* Design Studies, No 3, pp 221-227.

Cross, N (2001), *Designerly ways of knowing: Design discipline versus design science,* Design Issues, No 17, pp 49-55.

Dewey, J (1987), Özgürlük ve Kültür, çeviri: Vedat Günyol, Remzi Kitabevi Yayınları, Evrim Matbaacılık, İstanbul (original: 1939, *Freedom and Culture,* C. P. Putnam's Son's, New York).
Dökmen, Ü (1988), *Empati kurma becerisi ile sosyometrik statü arasındaki ilişki,* Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi-ayrı baskı, No 20, pp 183-207.
Findeli, A (2001), *Rethinking design education for the 21st century: Theoretical, methodological and ethical discussion*, Design Issues, No 17, pp 5-17.
Kolodner, J and Wills, L M (1996), *Powers of observation in creative design,* Design studies, No 17, pp 385-416.
Linzey, M (2001), *On the secondness of architectural intuition,* Journal of Architectural Education, No 55, pp 43-50.
Medawar, P B (1994), *Genç bilim adamına öğütler (original: Advance to a Young Scientist),* Tübitak Popüler Bilim Kitapları-5, çeviri: Nermin Arık, Ümit Matbaacılık, Ankara .
Özbay, Y and Şahin, M (1996), *Psikolojik danışmada empatik atmosfer ve beceri düzeyinde kazandırılması,* 3. Ulusal Psikolojik Danışma ve Rehberlik Kongresi, Çukurova Üniversitesi, Adana.
Rogers, C R (1983), Empatik *olmak değeri anlaşılmamış bir varoluş şeklidir,* çeviri: Füsun Akkoyun, Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, No 16, pp 103-124 (original: 1975, Empathic: an Unappreciated way of Being, The Counseling Psychologist, Vol 5, No 2).
San, İ. (1991), *Eğitimde yaratıcı drama,* Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, No 2.
San, İ (1996), *Yaratıcılığı geliştiren bir yöntem ve yaratıcı bireyi yetiştiren bir disiplin: Eğitsel yaratıcı drama,* Yeni Türkiye Eğitim Özel Sayısı, No 7.
Sachs, A (1999), *'Stuckness' in the studio,* Design Studies, No 20, pp 195-209.
Schön, D (1985), *The Design Studio,* published by RIBA Publications Limited, London.
Sungur, N (1997), *Yaratıcı Düşünce,* Evrim Yayınevi, Motif Basım, İstanbul.
Tunalı, İ (1998), *Estetik suje çözümlemesi subjektivist-psikolojik estetik,* Estetik, pp 23-46, Remzi Kitabevi, İstanbul.
Uraz, T (1999*), Mimarlık bilgisi "eskizler" ve düşündürdükleri,* Mimarlık Dergisi, No 289, pp 11-13.
Üstündağ, T (1994), *Günümüz eğitiminde dramanın yeri*

THEME: Enjoying First Year Design Education: Ability and Motivation

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ABSTRACT

This paper discusses how an innovative design methodology that encourages designers' involvement with properties and fabrication processes of common materials creates new understandings of tactility and of materiality in general. This discussion is based on an examination of students work at an experimental design course, with the first year of students in 2006-2008, namely the Materials in Design Process. This course focused on the relationships between materials, ideas, and design. It involved experimenting in innovative use of traditional and new materials and exploring the alternative materialization technologies for architectural design.

In this paper we discusses materialization methodologies with implication of the design problem "Creating Costume for Madonna" . Madonna is merely an image of that problem. We aim to create a costum with this image.

Materialization is a mode of revealing. We experimented with different design problems and technologies of revealing the essence of those materials, reinventing their uses and recreating composite materials. We call these methodologies of (re)creating composite materials—as suggested before—as the methodologies of materialization. We call the technologies that reinvent certain properties of materials for new uses as the making technologies.

Before describing these results, I will give a brief discussion about "making" in architecture and within this refere to a discussion of techne and technology, of consciousness and design, and of immaterialized versus materialized things in design.

The research was based on the certainty of what I had studied and tested during other teaching experiences, i.e. geometry, as well as material, is the foundation of statics and the conviction that this rule can be a foundation of design. Recontextualising and taking materials to new – not chance but necessary – levels has become a method.

Architecture has a multi-layered relationship with clothing, tailoring, and fashion. From a clear parallel between three-dimensional, often complicated structures or constructions. Traditionally, architecture is considered to be one part math and one part art. Of the different disciplines within math, geometry is considered an essential tool of architecture. This is the aspect of architecture that is now being used by fashion designers.

There are considerable overlaps between fashion and architecture in terms of technique and material. Fashion designers and architects share much of the same vocabulary and similar techniques of construction: pinning, darting, folding, wrapping, draping. Fashion designers have always been able to achieve complex, often architectonic garments using fabric. Today, many architects are looking to fashion and techniques of tailoring as they attempt to achieve more and more complex forms using hard materials.

Keywords: *Materialization, fashion and architecture, designer, costume, techne.*

Introduction

Today, adherence to the truth of a material is no longer an absolute for design. New technologies and design methodologies are being used to customize, extend, and modify the physical properties of materials, and to invent new ones endowed with the power of change. The new, mutable character of materials, as expressive as it is functional, has generated new forms as well as more experimental approaches toward design.

The discipline of design demands a reciprocal relationship that can move from idea to materiality as well as in the opposite direction moving materiality to idea. Today, adherence to the truth of a material is no longer an absolute for design.

Traditionally, architecture is considered to be one part math and one part art. Of the different disciplines within math, geometry is considered an essential tool of architecture. This is the aspect of architecture that is now being used by fashion designers.

Urban fashions, as mobile shelters, can extend the spatial framework of the cityscape far beyond its boundaries, transcending architecture's limitations of being bound to a fixed place. Because fashion frequently corresponds to the type of architecture that it is intended to be worn in, it transforms the figures moving through the cityscape into walking signifiers of it. Throughout history, urban populations have used clothing to signify their relationship to the built environment as they struggled to define the territory around them. The cut of ecclesiastical vestments and nun's habits reflected the arches and transepts of sacral architecture, while the sartorial styling of a concierge's uniform was inextricably linked to the formal classicism of a grand hotel. Skateboarder clothing brings to mind the sweeping ramps, heady curves and colourful graffiti of the performance arena, while the deconstructed tailoring of Comme des Garcons is a favourite of the architects who pioneer decontructivist buildings.

I proposed that my students take a step back from the artificial to the natural to better understand the artificial, in open dispute with those who believe that new ideas and research only come via the discovery of new materials. There is nothing new, only different physical aggregations. We will take the liberty of extending that to beauty.

One of the transformations that have taken place in the world of architecture after the 1990s is this: We are abandoning the ideology of the form and

advancing towards establishing the ideology of the process (Tanyeli, 2008). Now that the designer has lost his former absolute sovereignty over the final form, what can he do? That is, he can begin by designing the architectural production process rather than the final form. He can create a choreography of the practices that depicts which practices will be merged together according to which 'scenario'. He doesn't draw a final shape but a road map. This is what happens at the experiment at our course; though perhaps it would be better to say what happens in the different phases of the series of prototypes, as it is in different stages. If you should ask
" What use is it?" I would say it is useful for experimentation. It helps us question how wide a series of possibilities we can create today in the context of planning, calculating and implementing. However, there is no guarantee that we will be able to use this series of possibilities in the future. All the same, we will keep trying. Because what creates the future is the experiment itself, it is the practice of experimentation and not particularly the specific result of that definite experiment(Tanyeli, 2008).

1. Techne and Technology

We started our design course—i.e., the Innovative Materials in Architecture, the Department of Architecture at the Osmangazi University in Eskisehir, Turkey—by questioning the concept of design and of technology and their relations with materials in particular. With the help of the concept of "techne," we started to investigate the physical, mechanical and chemical ways of understanding and revealing the essence of the things and materials—that is, materialization technologies. We continued this investigation with the methodologies of designing these materials for particular purposes, namely for creating surfaces. We approached these technologies and methodologies not as the means to create something from nothing. Rather we took them as the ways to re-create by revealing the hidden nature of the things and materials. This understanding implies that we are part of nature rather than above or outside nature.

Martin Heidegger is the philosopher who has responded most profoundly to the cultural impact of technology. According to him, techne refers not only to the activities and skills of the craftsman. It means also the arts of the mind and the fine arts. In this sense, "techne belongs to bringing-forth, to poiesis; it is something poetic" (Heidegger 1992: 318). In other words, techne is revealing the essence of the things but not making or manufacturing that. Meanwhile, technology appears as "a mode of revealing". In the realm of bringing-forth or revealing the essence of material, end and means as well as instrumentality are important. Here "instrumentality is the fundamental characteristic of technology" (Heidegger 1992).

Furthermore, technology evolves. So today we can talk about “traditional” and “modern” technology. Yet, on one hand, the most basic characteristic of technology as a mode or way of revealing still keeps its nature. On the other hand, the evolution of technology does not happen by itself. That is, it is not self-evolutionary. Within Marxian sense, the evolution of technology happens with the help of the determined, conscious and active individuals within various historical contexts. Thus, the history of technology is not the registration of products or instruments that support human survival. Rather it is the proof of the productivity of human intelligence and the variety of life styles in different historical contexts (Basalla 1996).

2. Materialization Technologies and Design

We have already suggested that technology is a mode of revealing the essence of the materials. With the use of tools in human history, a new kind of relationship between human and other species and things has emerged. Virtually, everything has been within reach of the human who has been capable of using tools. Humans have gained new power relations within nature. By using the tools, humans can change and transform the mechanical, physical, and chemical characteristics of things. Rather than their state in nature, things become materials only after they gain new functions and meanings through these ways—or namely materialization technologies. The materials provide humans with opportunities for using things for their own purposes.

Figure 1. The corn unit has potential to reveal its essence.

Figure 2. If this corn is exposed to heat it will reveal its esence.

Employing the materialization technologies also evolves with design ideas. Humans define and design such ideas according to their needs and desires. Whereas the design processes “materialize” things, we can call such processes also as “materialization of substance.” In this sense of design, material stands out as an illusion that enables us to wonder and explore between the possibilities and the realities of the things.
Consequently, the material that is designed within respect to the notion of techne (re)shape
the relationships between the body and the world. As you seen the Figure 1,2 the raw material(corn unit) is transformed into materialized things.

3. In The First Year Design Course: Materials in Design Process (The Department of Architecture, First Year, 2007-2008 Spring Term).

In our design course, we asked students to make prototypes of custome that stand out of composite materials. For studies in our design course, we suggested students to use common materials that are easy to find in daily life. We favored such materials for their performative qualities that are important in materialization technologies. These are materials such as plexiglass, polymer films, rubber, sponge, glass, electric cable, different sized wire-netting, hammered glass, string, wooden bar, acetate, silicon etc.

The research was based on the certainty of what I had studied and tested during other teaching experiences, i.e. geometry, as well as material, is the foundation of statics and the conviction that this rule can be a foundation of design. Recontextualising and taking materials to new – not chance but necessary – levels has become a method.

I proposed that my students take a step back from the artificial to the natural to better understand the artificial, in open dispute with those who believe that new ideas and research only come via the discovery of new materials. There is nothing new, only different physical aggregations. We will take the liberty of extending that to beauty.

We experimented with different methods and technologies of revealing the essence of those materials, reinventing their uses and recreating composite materials. We call these methodologies of (re)creating composite materials—as suggested before—as the methodologies of materialization. We call the technologies that reinvent certain properties of materials for new uses as the making technologies (see Diagram 1).

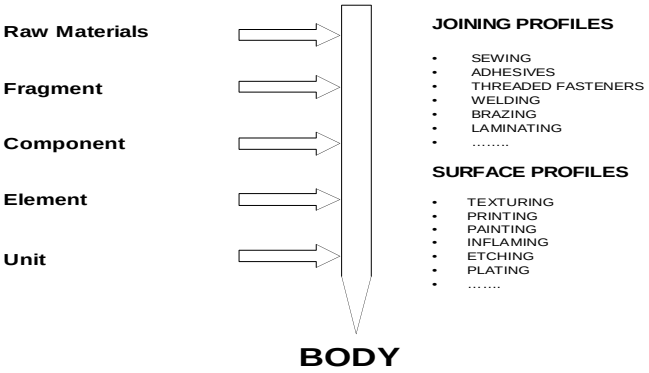

Diagram1: Methodologies of Materialization and Making Technologies.

Through these methodologies and technologies, the strange and humble neutrality of these materials act as flexible media. They go through various stages of mutation and fabrication, which increase their use, capacity, and performance in composing new materials. In addition, we recognized that sensory components—such as light, texture, and optical properties—appear as by products and also materials on these designed surfaces. Below we detail how these methodologies and technologies created various surfaces of composite materials.

In this paper we focused on the relationship with the architecture and the fashion. In the making technologies, we aim to use the techniques and terminologies of folding, pleating, wrapping and weaving by designing process.There are considerable overlaps between fashion and architecture in terms of technique and material.

Radical exchanges are taking place between architecture and fashion today. No longer regarded as mere structures for living, working or wearing, both garments and buildings have become metaphors for urban life.

As you seen the figure 3 and 4, fashion designers as like the Bradley Quinn and Husseyin Caglayan uses volume to reinterpret traditional proportions . By using the same design techniques an architect would have for a building, they transforms garments into complex three-dimensional shapes.

Figure 3. The custome is designed Husseyin Caglayan.

Figure 4. The custome is designed by Bradley Quinn.

Especially Bradley Quinn traces the structures and spatial boundaries that are the common guidelines of fashion designers and architects and succeeds in pinpointing the similarities and differences these creative fields have gone through in the last century.

In this spring term 2007-2008, our design problem is “Creating Costume For Madonna With Materialization Methodologies”. Madonna is merely an image of that problem. We aim to create a costume with this image. In order to understand the relation between material and design, we prefer to create costume design.

Student Works:

In this work, the student used a methodology that does not change the characteristics of the materials—sheet of papers—but brings them together by juxtapositions in order to reinvent a new composite surface. Our purpose is to transform a 2-dimentional material into a 3-dimensional one.

Ozlem’s work tried to achieve an organic form in line with its inner ordering principles, framed by the use of curvilinear metal stick elements.

Figure 5. The paper is transformed a 2-dimentional material into a 3-dimensional one.

Figure 6. The metal construction is enfolded by the paper.

In recent years, the boundaries between architecture and fashion have become increasingly blurred. Both architecture and fashion are based on the human body and on ideas of space, volume, and movement. Each functions as shelter or wrapping for the body—a mediating layer between the body and the environment—and can express personal, political, and cultural identity.

Through these methodologies and technologies, the strange and humble neutrality of these materials act as flexible media. They go through various stages of mutation and fabrication, which increase their use, capacity, and performance in composing new materials. In addition, we recognized that sensory components—such as light, texture, and optical properties—appear as by products and also materials on these customs.

Radical exchanges are taking place between architecture and fashion today. No longer regarded as mere structures for living, working or wearing, both garments and buildings have become metaphors for urban life. The organization of space has always been the essence of both fashion and architecture; fashion's architecturality unfolds in its containment of space, while architecture continues to be fashioned by its relationship to the human form.

Figure 7. She examines the metal-clad and structure.

Figure 8. Metals play a central role in most design problem.

The result of the liberation of the female form was the reclamation of skin sensibility or tactility and this period was marked by the introduction of new and unprecedented levels of tactility in clothing.

They examined how pliable metals, membrane structures, and lightweight plastics and glass borrowed from building design crop up in the creation of Couture garments.

CONCLUSION

Today, research and development in residential technology is largely limited to energy efficiency and cost management, which are sponsored by government agencies, or to improved construction practices, mandated by insurance companies. Accomplishments, for the most part, are measured in incremental improvements in existing methods and materials, not the kind of innovation that requires observation then imagination. Architecture schools, for their part, have preferred giving form to theory rather than probing the possibilities and limitations of either new or existing methods and materials. We suggests that students are rediscovering the relationship between design and material. Acknowledging that architects are not materials scientists but designers.

In our design studio we are borrowing the techniques of pleating, stapling, cutting and draping from traditional tailoring to design buildings that are flexible, interactive, inflatable and even portable. At that time students focused on how the characteristics of materials are perceived through the human senses in response to the theory that virtual reality and simulation actually reduce the information we absorb by eliminating that which comes from material tactility, smell, and sound.

The discipline of design demands a reciprocal relationship that can move from idea to materiality as well as in the opposite direction moving materiality to idea. I believe that to blame such a wide spectrum of problems on a

material alone is indefensible, and say that instead of being a question of good or bad materials, it should be a question of good or bad design.

The time frame assigned to architectural production has been continually compressed, and the distance between design and fabrication is narrowing. At the same time, we are losing direct contact in both social interaction and the material fabrication process. We have come to rely on various software programs, which assist us yet discourage critical awareness, as they are designed to solve problems easily and quickly; in so doing, however, they leave no room for discursive and speculative thinking. This loos of contact is reflected in our increased use of remote control and simulation techniques for exploring virtual reality.

REFERENCES

1.Ashby, M. and K. Johnson,K. (2002) Materials and Design: The Art and Science of Material Selection in Product Design, Oxford: Butterworth-Heinemann.

2.Basalla, G. (1996) Teknolojinin Evrimi, translated by Cem Soydemir, Ankara: TUBITAK Yayınları.

3.Frampton, K. (1996) “Introduction: Reflections on the Scope of the Tectonic”, In Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture, John Cava (ed.). Cambridge, Mass., and London: MIT Press, pp 1-28.

4.Heidegger,M. (1992) “The Question Concerning Technology”, In Basic Writings:Ten Key Essays, David F. Krell (ed.). New York: HarperSanFrancisco Publ.

5.Kim, R.S., (2006) “A study on the definition of the term “Tectonics”in Architecture”, Architectural Research Vol 8, No 2, pp17-26.

6.Mori, T.; (2002) Immaterial/Ultramaterial: Architecture, Design, Materials, New York: George Braziller Inc., pp. 41-49.

7.Semper, G. , (1989). The Four Elements of Architecture and Other Writings. Trans. Harry F. Mallgrave and Wolfgang Herrmann Cambridge.

8.Semper, G. (2004) Style in the Technical and Tectonic Arts; or, Practical Aesthetics. Trans. Harry F. Mallgrave (Santa Monica,).

9.Pallasmaa, J. (2001) “Surface, Touch and Time”, In The Brick, Hanni Sippo (ed.). Helsinki: Alvar Aalto Foundation, pp 13-29.

10.Patterson, T. L. (1994) Frank Lloyd Wright and the Meaning of Materials, New York: Van Nostrand Reinhold.

11.Tanyeli, U. (2008) “The Context Of This Experiment: Designing The Process Instead Of The Final Form”, Fibrous Room, Evolving Structural Logic Workshop, Istanbul.

12.Virilio,P. (2005) “ Art as far as the eye can see”, Domus 886, November.

13.Zumthor, P. (2006) Thinking Architecture, Birkhauser - Publishers for Architecture, second expanded edition, pp.22-25.

14.B. Hodge, P. Mears, S. Sidlauskas 2006, Skin + Bones: Parallel Practices in Fashion and Architecture, Thames & Hudson.

15.B. Quinn (2003), The Fashion of Architecture, Berg Publishers.

16.C. Evans, S. Menkes, T. Polhemus, B. Quinn (2005), Hussein Chalayan, NAi Publishers,.

17.G. Beylerian, A. Dent, B.Quinn(ed)(2007), “Ultra Materials (How materials innovation is changing the world), Thames&Hudson.

18.http://www.dexigner.com/fashion/news-g6627.html

19. http://www.egothemag.com/archives/2006/04/fashion_and_arc.htm

20.http://www.thecampuschronicle.com/communique/spotlight/070518.cfm

21.www.aiany.org/calendar/... (983)

GLOBALIZATION AND REGIONALIZATION: CHANGE IN CLIMATE, CHANGE IN EDUCATION

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ABSTRACT

This paper is stressing the genuine problem of global changes in designing the built-environment, which is the forgotten factor; design with climate. It is further arguing the necessity of it in the curriculum of design education, as a mandatory course. The outcome of 21. Century, shows that sustainable architecture is the recycled term of vernacular architecture. It is the global warming that makes the people aware of the consequences of intense use of technologies. If the climate is changing, the principles of design with climate remain unchanged. Since the essence of design can act independent from its location, it is not important where it takes place. Therefore, the new boundaries of vernacular architecture are defined by the climatic regionalism. As David (2006, p.170) suggested "the 'Age of discovery' to the new millennium, process of change have been underway that have altered the relations and connections between peoples and communities- process which have been captured by the term 'Globalization'". I would like to stretch this idea of process of change to the built-environment. In this respect, traditional architectural features of the building forms and spaces will appear at distant locations from their origins.

This paper deals with new perimeters of design education due to globalization versus regionalization. In order to determine the degree of globalization, Berg suggested the formula; division of people who live outside of their hometown to the total number of population. (quoted in Günsoy, 2006, p.9). Same formula can be applied to the field of architecture and education. Gathering all this information helps us to see how the essence of design principles and its relation with climate will actually be rediscovered.

Finally, the purpose of this paper is to question the role of globalization in the field of architectural education. How much can globalization make an impact on curriculum change? The contribution of this research will pull the attention of related parties to realize that regionalism and globalization are interdependent to each other. On the other hand, this research will show us how environmentally aware architecture eliminates a dilemma that high technology has created. In order to raise the awareness, these issues should be focused on during the education, in the content of the design curriculum. This research will not be conclusive, rather raise critical overview for the built environment and education of the designers. It may lead the scientist to begin searching the locations of new climatic regions due to melting icebergs, global warming and unpredictable weather conditions on one hand, and be an initiative for curriculum assessment committees to take active role, injecting courses related to global issues, on the other hand.

Key words: *Globalization, Regionalization, Design with climate, Education, Sustainability.*

INTRODUCTION

As, a designer in the field of building industry, I know that we create new ways of comforting people in their enclosed environment. These new ways have always been parallel to any inventions of technology and communication, which affect the human comfort, field of architecture and its education methods. With the advanced communication, it has become very easy to see and to reach these new materials and their application methods since they are only one button away on keyboards. Because of these advancements, world has become small and easily accessible which create the new word, called 'Globalization' since late 20th. Century. Living through all these changes raises the questions: What is globalization? How does it affect the profession of architecture, interior architecture and education? What impact does it have on the environment? Where are we, and what will be the next?

I believe that the umbrella of advanced technology provides the opportunity to architects to design buildings, which conform to the limits of technology, not the ecology. So that we cannot recognize our surroundings when we look at the buildings. Buildings become universal and standardized, regardless of the climatic zones in which they have been built. However, I believe that the principles of design are universal, not the buildings. Otherwise, It causes, loss of identity. This technologic aesthetic is actually the product of irreplaceable energy usage in the building industry. Consequences of all of these aspects result in global warming and changes in our climate and our environment.

At this point, I would like to address globalization under two topics in response to global warming: The first one is about seeing the traditional or vernacular architecture out of their original context since climate is changing due to global warming. The second one is about seeing the technologically pleasing global architecture at any corner of the world. I shall assume that globalization should not render the built environment standardized and monotonous manner around the world. This, in fact, goes against the character of design.

As an approach to environmentally sensitive architectural design education, this paper first poses a simple but a crucial question: Is it globalization or global postmodernity or glocalization that the design education is leading? Furthermore, I also argue the courses related to environmental issues are as necessity and as important as other mandatory courses of the architectural education. Implementation of these issues into the design studios is discussed according to the survey, conducted to the students of the graduation design studio and first year basic design students of Bilkent University, Ankara, Turkey.

GLOBALIZATION AND REGIONALIZATION

As we understand from its meaning, a globe is a large and rounded mass (Webster, 1990). Since this large mass is the world itself, we may question whether it is a mass or a mess when we face with the affects of globalization. As Mulgan (quoted by Held, 1998, p.19) states that it has some vital dimensions like pollution of the environment all bring the world's people closer together (Held,2000).

The meaning of globalization is to make everything worldwide in scope and application (Webster, 1990). How something happens locally but known globally. We, as human beings work hard over the years, especially in the field of technology, and make this possible. It is the speed of communication, which makes people easily reachable and interconnected. If an unrecognizable technologically aesthetic building has been built at one location of the world, it is known easily worldwide due to the advancements of technology. Since the people admire such new applications without any 'critical Thinking', we can see such buildings all around the world.

It is advanced technology that makes the skyscrapers and glass buildings livable and comfortable. They are built by means of high construction techniques, mechanical heating and cooling systems and new use of materials; they all require excessive use of energy. Nevertheless, this privilege brought the sameness to the built environment, that contextual requirements lost importance to technological advances. Foreign architects have been commissioned to design beyond their national borders. According to Ibelings (1998, p.69), "their buildings stand as beacons in a sea of uniformity, yet singularity gives them an oddly misplaced quality".

Could it be the architect's manner, the ethics or the quality of higher education, which result in such, built environment, so totally out of context? We, as designers of the built environment, must value the differences and design built environment of commodity, firmness and delight, as stated by Vitruvius, in the first century, BC.

Valuing differences is hidden dimension of regionalization Regional concentration refers to the issues related to climate, culture, locally available materials and the orientation of building. These make the buildings unique, indigenous and contextually fitting. While communication and transportation technologies create innovations and negates the distances between places, their excessive consumption of the non-renewable energy resources, creates pollution (Berkebile, 1994). This is also valid for production of advanced building materials and techniques. For this reason; I shall raise the subject of the importance and the need for regionalizing of global architecture. I shall also address concepts of Vernacular, Sustainable and Ecological Architecture, respectively.

‘Node of expression’ is the corresponding meaning of the word ‘vernacular’ (Webster, 1990). This node is regional and related to all extended local issues. Expression is that architecture, which is formed by climate, culture, environment, and locally available materials. I believe that sustainable architecture is the recycled word of vernacular architecture. Oktay (2001) states that sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. Hence, vernacular, almost by definition, is sustainable, and will not exhaust the local resources. In other words,
sustainable architecture deals with recyclable materials, energy efficient buildings, on-site use of waste systems, and sustainable way of living and less energy intense materials. For example, Fisk (1994, p.43) states that “ Sulphur is 97 % less energy intensive than Portland cement, and is the 14 th most available element on the earth…. by just spraying the sulphur, joints of drystacked blocks jointed by it” There are other scientific innovations concerning less energy intensive materials, which can be used in the field of building construction. It is not possible to reach such information unless you choose to do so. Thus, I encourage curriculum changes, which reinforces student’s environmental awareness. I attended a lecture in March, 2008 at the Embassy of the United Stated, Ankara, given by Orgen, a professor of the school of architecture at Auburn University, new teaching techniques of architectural design studio. It was set up farther a way from the campus that students face an opportunity for group interaction with clients in designing and erecting a building recycled and locally available materials. It is the only positive and concrete progression; I am aware of which involves sustainable issues of architecture in a real life design studio environment, during the education process.

On the other hand, Crowther (1992, p.34) stated; “Ecological Architecture takes its inner form from efficient and healthful interior solar and climatic space planning…”Ecological Architecture has also a contextual approach to design a building: site, orientation, form, openings, intervention, expectation and construction techniques of the building should satisfy the ecological issues. On the other hand, solar energy for heating air and water utilities of the buildings is another ecological solution, which is actually the product of technology and uses the free and renewable energy, but has not often been a choice of neither a designer nor a customer.

Does the chosen paint cause allergy? How the upholstery or its finishing may affect the respiratory system of the users? Answers of these questions should be studied and applied to building designs. It is important to realize that ecological design merges the interest of sustainability, environmental consciousness, green, natural and organic approaches to evolve a design solution. if the building is not satisfying the environmental balance and we keep depleting the world, we create local, regional and global degradation of

environments. We should regionalize the globalization and eliminate its negative impacts by thinking critically about technology and innovations, which affect our built environment, our health and our eco systems.

CHANGE IN CLIMATE:

As we proceed towards the 21st. Century, change is inevitable. Research studies in every field result in new developments for human beings to make living conditions easier; but not safer. Eventually, what we see when we look back, is just devastating. All these improvements are not actually advancements. As Berkebile stated (1994, p.7, 8) in his article, there are serious outcomes due to these advanced technologies, some of them are listed below:

- A hole in the ozone layer allows the penetration of UVB, which causes the melting of icebergs, changes in water levels, changes the shape of lands and endangering health of human beings.
- Energy needs to produce aluminum from bauxite is one of the most energy –greedy processes in the construction industry.
- Use of energy for the production and the transportation of exported building materials like granite and wood are unsustainable.

All the above conditions happen due to excessive use of unnecessary energy usage and irresponsible attitudes of human beings. We become so dependent on what we have developed in a way that it began to change the nature and the fabric of our communities (Berkebile, 1994). This condition will lead to two contradictory stances: First, we reject the total change of climate and live as nothing is serious and will be serious or reduce the result of global warming and ecological degradation in order to regain our world in, which we live. If we cannot eliminate the impact of global warming totally, we can at least decrease its effect by major changes of our living standards, which seem impractical. As Strong and Fraic (1994, p.79) stated; “engagement of a well-informed public will be essential to maintain the political actions and to carry out the appropriate altitude for the transition to sustainability”. It means that radical changes are required at every level of society.

Eventually, we accept the fact that climate change is inevitable. Then, we should regionalize this global affect. This regionalization takes place due to new climatic conditions. If change in climate is inevitable, so are changes to regions. For example, tempered regions become hot arid due to this assumption. Eventually, we shall begin to see traditional and vernacular architectural features of building forms and living spaces appearing far from their origins. In other words, because of globalization, both vernacular features of the architecture and its climatic conditions are moving from their original regions to new locations. It also forces a person to buy homes, designed for other countries; another characteristic of globalization. Since

the principles of 'design with climate' act independently, our regionalization should begin at this point: principles and components of architectural design should be applied to every building of the any climatic regions of the world, with the privilege focus given to sustainability and ecology. When we accept climate changes, we should also accept the migration of people, as it happened in ancient times. Since global movement of people is one of the patterns of globalization, it can be measured by Berg's formula: 'division of people who live out of their hometown to the total number of population' (quoted in Gunsoy, 2006, p.9). With the same approach: Levels of exchange between the climatic regions can also be measured by this formula: Quotient of traditional buildings, which are built out of their original context to the total number of traditional and vernacular buildings. Perhaps, emerging trends may be the topic of another research project.

Since we are not able to reject global warming and change in climate, sustainability is a necessity to overcome the effects of global warming on the built environment. This is not only the designer's responsibility to maintain the world. It should be regulated nationally. There are some non-governmental organizations, citizen groups and educational institutions which have gained world-wide recognition. But, It shows that there has been over 25 years of awareness, but unfortunately is not adequate to make the responsible parties to take serious actions. Perhaps, their education failed to instill an ethical stance towards the environment. Training or even perhaps brain washing about maintaining our world should start as early as possible in our education institutions and should be reinforced during our professional studies. In the arena of Architectural studies, especially environmental factors should be stressed, with an emphasis on 'design with climate'- A 'change in climate' demands A 'change in education'!

CHANGE IN EDUCATION

It has been stated by Young (Lauder, Brown, Dillabough, Halsey, 2006) that the acquisition of knowledge is the key feature that distinguishes education (general or vocational) at any level from all other activities. I would like to stress this keyword as expressed by Judith Williamson:

> "….. What really matters about knowledge is that it is true or rather that we can learn or find the truth or truths as best we can, in any field. This is what education and more specifically, universities are for." (quoted by Young, 2006).

Young (2006) further, summarize this expression by stating that education presupposes the possibility of both knowledge and truth (Lauder, Brown, Dillabough, Halsey, 2006).

Since I am focusing on the training process of architectural education, it is the truth and the knowledge about ecology and sustainability that I shall

emphasize whether design students are aware of both, theoretical and practical means. In order to discuss the degree of importance of these environmental subjects, in design education, first, I prefer to discuss what has been suggested recently as a similar research study, and secondly, to explain the conducted local survey.

In Egypt, Suggested way of educating design students, in concept, relies on both regionalization and globalization. Ahmed (2006, p.282) claimed that the quality of architectural education as a process is, or should be, primarily measured and evaluated through its ability to 'produce' an architect who is capable of dealing through architectural design, with the issue of locality in a sensible and innovative way. It has been solved and adapted by the Egyptian architectural educators that new trend is based conceptually on locality in term of meaning and values, utilizing the up-to-date global technologies and features. It is actually the combination of two words: global and local. It has been explained by Ahmed (2006, p.293), that Glocalization is a term joined from two terms "Global" and "local". It also stresses on 'Critical Thinking', which I really admire. What I have also noticed is that the concept has been adapted by Egyptian educators in architecture, for both design studio and specifically-tailored compulsory courses.

Aksoy (1967) stated that form, function, technology and ecology are the components of design. It has also been suggested by the Vitrivius that Commodity, Firmness and Delight are the proper ambitions of architectural design (Stemear, Steane, 2004). It is further suggested by Steamer and Steane that commodity and delight correspond to the comfort of human being as it is related to thermal conditions and quantity of light. Commodity has also been coupled with firmness and defined, as to address to the adaptability of time, the structural and environmental strategies that make buildings environmentally reliable and sustainable. Similarly, delight component is considered as the aesthetics of the built environment. On the other hand, Antoniades (1986, p.174) has prescribed the environmentally relevant work of architecture with the formula of Form + Function + Economy + Everything Else. As a result, I decided to list 16 components and prepared a survey, based on the above formula. It measures level of importance of each component, which students consider during their design. Five choice values were offered: Very important, important, mildly important, less important, and unimportant.

This survey is given to the first and fourth years of Interior Design students at Bilkent University and also to the arbitrarily selected practicing architects with over ten years of experiences, in Ankara. The main purpose is to find differences between first and fourth year design student's component choices, according to their importance level in their design and wanted to learn how is the components ranked separately for each class. I have used the SPSS program to test the survey results. I ranked the components

according to their mean frequencies and I also compared the degree of importance of environmental components, with respect to other selected components: Climate, Sustainability, Ecology, Context, and Orientation as compared to Form, Aesthetics, Economy, and Technology separately. Results are as shown below:

I-Level of Importance to the Components According to Bilkent University IAED Students and Practicing Architects:

Descriptive statistic studies show that the components of aesthetics is at the fourth, technology is at eleventh in the rank whereas sustainability is fourteenth for the first year students. For the students of fourth year design studio, aesthetic component is the fourt, form is the seventh, climate is at the tenth and the sustainability is the fourteenth in the rank. All these rankings have been done according to their mean values. For example: Mean importance level of Climate component that fourth year students at Bilkent University yield 3.68, whereas mean level of Aesthetics component is 4.28 . When we look at the practicing architect's choices of importance levels of practicing architects, the lowest one is the Ecology component.

II-Comparing First Year and Fourth Year IAED students of Bilkent University to the selected components :

The Bar Chart shows that there is a summation of frequencies of very important and important marks of both students of first and fourth year. Aesthetics has the largest number of frequencies when compared to climate, contex, ecology, orientation and finally, the sustainability. For each component, fourth year students' frequencies is lower than the first year students.

III-Comparing Paired Componets for IAED fourth year Design Students at Bilkent University:

The component aesthetics has been paired with climate,Context, Ecology, Orientation, Sustainability respectively.According to the Paired Sample t Test; there are nine pairs that each pair has istatistically significant difference in their means with 0,05 significance level. For the sample group of Practicing Architects in Ankara, test shows that Form and Aesthetics have also istatistically significant difference in their means with 0,05 significance level.

IV- Comparing selected six-paired components of first year and fourth year IAED students of Bilkent University:

The chart shows the summatıon of important and very important frequencies for the selected components of design. They have been ranked from the highest to lowest, to show which component is more important than the other when we are comparing first year and four year students. Generally, It show that importance levels of each component of first year students is higher than with fourth year students.

CONCLUSION

In conclusion, it is debated that one of the most important result of globalization is global warming. It affects our environment so intense that we became slaves of what we produced. Every profession has contributed to this phenomenon in various scales. In the profession of architecture, we should take it seriously because of the fact that, if only half of the new commercial buildings reduced their energy consumption by just 50%, each year we could save our environment from enduring 6 million metric tons of CO2 emissions (taken from unprinted presentation). As we all know, it increases the size of hole in the ozone layer, causing global warming.

To prevent degradation of environment, there must be established awareness programs that fits everyone. For the nonworking professionals, there must be local centers, managed by local authorities, so that it could be easily reached. For the practicing professionals, related associations and public services should provide obligatory training seminars. In this way, they will understand the meaning and adapt an altitude to contribute at least to their close environment. It should also be undertaken by the universities as an extension of their programs, offering community education, based on global warming and environmental concerns.

I prefer to begin my suggestions, by evaluating my survey. When I look at the level of importance of the architectural design components, components of climate, context, sustainability, and ecology are moving down from higher frequencies to lower frequencies for both first year students and fourth year students, but first year students have higher mean values. It shows that even though the sample class is a freshman class, as new comers, university students are more aware of the environmental issues. It is necessary to mention that fourth year students are ‘independent’ than first year students. Another survey should be undertaken after four years, for the than freshman students now graduating.

The pair of aesthetics and form, was also more, demanding components than sustainability for fourth year students. Nonetheless, it is also admirable to see that technology in its tenth place is less important than climate. It could be the affect of the design project with the emphasis given to sustainability for fourth year students. Since there is also statistically significant difference between economy and other environmentally important

components, I wonder, how do they interpret or understand economy, since they don't have any professional experiences and any courses related to economy. This may lead us to another research topic.

According to the analyzed data, as shown in change in education portion of this paper, I realized that sustainability is not a topic to be thought only once, and in one semester. It should be maintained as per Ahmed's suggestion (Ahmed, 2006, p.294-295), by compulsory courses like 'Critical thinking in Architecture: Local, Global, and Glocal' and Theory of Architecture.

In this case, I further extend the idea of educating environmentally sensitive designers by letting them take mandatory courses from related departments. Why not taking courses from Environmental, Chemical, Metallurgical and Material Engineering departments? There must be courses specifically designed for designers, offered from these departments. They are not the elective courses, which gives the students freedom, since the real freedom is the livable world. These courses should begin as early as possible during their four-year educational period, to raise awareness and to lead the students towards designing un-plugged buildings. They should get into details of passive energy, wind power, advanced local materials and natural ventilation for un-plugged built environments. Further, there must be series of lectures which are given by the master professionals, related to ecological problems and solutions and these lectures should be attended by the students similar to the one credit orientation course required to be taken by the freshman students in order to graduate. Additionally, the most important point is to establish a course, specifically design for the department of architecture, and interior architecture, which deals with 'Unplugged-glocal' issues, combined with small design projects. That way students with knowledge about sustainability and ecology, will be prepared to applied this knowledge not only to their projects in school and in the world, but also to their living standards.

I also interpret the pair sample test of practicing architects that they are placing more importance to form and aesthetics as compared to ecology component. Actually, knowing the value of ecological architecture, I propose a series of job-training lectures, offered from related chambers with certification like Leadership in Energy and Environmental Design (LEED) certification program in USA and CANADA.

On the global scale, aside of the local activities related to ecological problems of our world, I believe that, there must be established and united institutions which control world - wide developments concerning global issues, including educational activities, in order to save the world, we live in. Otherwise, It will be a mess not a mass that we will be living on.

REFRENCES

Aksoy, E (1987), *Mimarlıkta Tasarım Bilgisi*, Hatipoğlu, Ankara, Turkey

Al-Qawasmi, J and Velesco, G V (2006), *Changing Trends in Architectural Design Education,* CSAAR, Morocco

Antoniades, A (1986), *Architecture and Allied Design,* Kendall/Hunt, Iowa, USA

Crowther, R (1992), *Ecologic Architecture*, Reed, MA, USA

Günsoy, B (2006), Küreselleşme Bir varoluş çözümlemesi, Ekin, Ankara, Turkey

Held, D (2000), *A Globaiızing World? Culture, Economics, Politics*, The Open Unviversity, NY, USA

Ibelings, H (1998), *Supermodernism Architecture in the Age of Globalization,* NAI, Rotterdam

Lauder, H, Brown, P, Dillabough, J, Halsey, A.H, (2006), *Education, Globalization, Social Change*, Oxford, UK

Oktay, D (2001), *Planning Housing Environments for Sustainability: Evaluations in Cypriot Settlements*, Yem, Istanbul, Turkey

Royal Architectural Institute of Canada, (1992), *Micro, Macro, Global: Architecture and the environment*, Royal Architectural Institute of Canada

Steemers, K and Steane, M (2004), *Environmental Diversity in Architecture,* Spon, NY, USA

Note: Tables and Figures will be presented with power point.

NON-BASIC IS CANONIC BASE

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ABSTRACT

NON-BASIC IS CANONIC BASE

Design activity is to be able to listen to the external world, as well as to talk to it. Academic life Academic life is the first encounter where the first break in the language of man occurs in order to construct this dualistic action. For architecture students, this first encounter is mediated through basic-design. The text below should be considered as an attempt to constitute the concepts and principles of design-politics, which can be defined as non-basic, i.e. against basic design conventions.

It is non-basic in that

1. 'sub specie aeternitatis', that is that it does not have a timeless attitude. How old is a rectangular prism that we draw? Does it belong to Ancient Greek? Does it belong to date April 15th 1950? What about the box of cigarette on the table? It carries the traces of time, not the history.
2. It is desires to join the continuity of what exists by constructing structural problematics. It plans to break an egg into two and to rejoin it, but without using glue.
3. It glorifies what is accidental. It considers the promotion of the accidental is the premise of design-mind
4. It traces what will emerge, not the final-product.
5. It attempts to construct the reason-stratagem of the mind, wanders among these, and thus embraces over-design as a memory-stratagem.
6. It experiences constructing mind on ruptures, deformations, deconstructions, destructions. It likes mold, for example.
7. It tries to understand with the guidance of feelings of guilt feelings
8. It seeks the 'organization of the beginnings', the 'zero-point' of man in perceptions and in relations. It is speculative. For example, it speculates on the first touch of 'Lucy' to the stone, which happened fifty thousand years ago. It clings to chaos.
9. It is aware of the importance of the perceptions which emerge from the unity of perceptions, not the ones which stand alone. It knows that it can establish a novel design parlance only if it works with this unity. My mouth waters when I see someone eating lemon. Seeing supports taste and touching. Aroma is not simply a smell; it is something more than that, in the same way as a forest is something more than trees. In aroma, smelling and taste are combined into a complex chemistry. Viewing is not a simple act of seeing; it is to amalgamate the perceptions of smelling, taste and touching into the world with the guidance of seeing.
10. It defines the structure as the organization of the magnitude. What

is the weight of a pinch of salt? It loves to estimate. It considers what can be felt as forces without units.

11. Line is constructed into a plane, and plane into volume. The action of making which therefore emerges organizes our contact with the world. It configures the knowledge of this experience.
12. Procedure is the hammer of intuitions and emotions.
13. It considers designing as pausing the vital processes of what exists. It follows the example of tomato which stops growing into a melon-size.
14. It underlines that shaping processes have a superior understanding than that of the shape itself. Please give me the circle that you drew on the paper. Here it is in my hand, but as a ring…

Key Words; structure, molding, organization of beginnings, zero-point of human mind, shaping process

NON-BASIC IS CANONIC BASE

I am not pretty sure to apologize or not for my presentation language. I should apologize, because you could have hard time to understand our discourse generally on "Design" specifically "Basic Design". Yes…I should not apologize.Because; Turkish is the language for me to think… to design… My mind is loaded by Turkish as a mean of electrical supply.Otherwise; my thoughts could not have been emerged at all. I should explain this statement.To speak in English is like to water the ocean. But…By manipulating Turkish;I could have ability to throw a piece of stone or a nickel to the ocean. Whatever...To speak and listen to the world are eternal states.What I make is "my words", and by those I speak to the world as a form of delirium.After getting what I say, your ears become solid.We are enclosed ourselves in an artificial world that is configured by what we have done. By this way; we step up "in-vitro" phase as a way of being.There is always an omelet (scrambled egg) in the plate; on the other hand, the egg is evaporated in our mind.This is the life menu that we face to the egg, when flashback situation is in motion…Non-Basic Design goes back to egg…

EPISODE I

I make dough like an earlobe temperament.In other words; “temperament” is defined by a sense that depends on tactile reflex.In fact; when it is meant to earlobe temperament, it have to be understood that I am in the period that its threshold timings of being earlobe temperament are unknown besides its vectorial size.The sense of prevision let me be in this situation.Intensity of kneading within the amount of dough ingredients gains a size towards to “an entity”.

In this process; a relation is constructed between amounts of universal materialism and aura of man-made operation. This relation is a “structure”.Structure is to organize “an amount” as “an entity”. In all languages, there are many words that refer to a certain situation in defined interspaces.In Turkish, like “smack of salt” or “rule of thumb - by just looking at it”There is not any unit for defining a smack of salt as a gram.

It is in the level of forces that do not have any unit.Structure is an amalgam of forces that do not have any measurable unit.(Güvenç, 2005) I usually ask students this question in the non-basic design course: How does a “tomato” finally figure out the time of being as a “tomato” and then not to go on or finalize the process of formation towards to size of “watermelon”? How is a tomato aware of ending up the formation process according to the usual or formal tomato size? There are some questions much more difficult than answers.This question is one of them. At the beginning, the matter of

interaction in terms of physical formation between the body of tomato and physical circumstances forms the entity.Later on, it transforms itself to resolve inputs of the entity.It moves on and ends up itself. The game is over.And being fan of Ajax is ended up like my Fenerbahçe Football Team.The gathering is being dispersed. Everybody goes back to home alone. The finalization of tomato formation means to resolve the ingredients and start over as repeated possible certainties like getting mouldy, from growing to moulding The formation of ending up situation points out “a design idea”.The theory of Per Back (1997) Self Organized Criticality clearly states scientific evidences of a sand hill formation that transforms itself to “an avalanche” after getting critical height.

EPISODE II

(Prophet of Circles…)

Geometrical figures never get old.A rectangular prism has neither “a place” nor “a time”.It could not be identified the rectangular prism where it is drafted… in Tibet or Nairobi.Also, it is not possible to date, Tibet in 1951 or Nairobi in 1871, because the prism is drawn. On the other hand, materialization of a prism makes the prism questionable, dateable and deformable by praxis “man-made making” in the model of a cigarette packet or geometrical configuration. A geometrical configuration of the cigarette packet is grasped in non-basic design by students!There is a prism of the cigarette packet in the hand of students.It is not a cigarette packet of the prism.
I let the students draw a circle on A4 paper.Most of them hand in the paper within what they draw.I emphasize that ‘No… the paper, that you give me back, is not a circle. One of them cuts out a circle from the paper that is a form of ring. Another one starts to roll a rope which is hung by weight. Suddenly, a circle emerges in the air. That is it! You are a prophet, the prophet of circles…

EPISODE III

(Haptestai…)

When I taste a lemon, your mouth becomes sour.This situation is a trigger of tactile reflex on the sense of vision leading. Our senses are not separated. In one of them, the others have free mobility in any way of competing in each other. If the senses are captured separately into our room of perceptions and these captured and not integrated senses work independently As a result of that, we only get the rectangular prism at the end. Why is brick wall “warm”? Or why is marble one “cold”? What is the reason of associational

identification “warm” as dirtiness and “distant” as coldness in our mind?

I think there are some words that identical ones could be in other languages.

Like Rayiha. “Fragrance in English” Rayiha is not aroma.

It is an experience in which “sense of taste” leads to “sense of smell”. It describes an integrated perception. In Greek language Haptestai is a tactile reflex that leans on sense of vision. A compound “moment” of all senses is “Silence”. Integrity of Senses…. Or “Unlimited richness of possibilities”… Or “Silence”…

Sometimes; I let students describe their models by stick while they assume themselves as blind people. By that way, I transform a route of the stick to a drawing.

“This is a square”, a blind-man square

The square belongs to procedure… not to bare perception…

EPISODE IV

(Lucy…)

As it is known, I have two types of age. One is phylogenic, the other is ontogenic.I am not only a many many thousand years-old but also 50 years-old human-being. There are lots times in which 50 years-old age replace its position in the thousand years all the time. I am able to perceive a person behind of me who have not interacted with me yet. This “perception” is a sign of many many thousand years’ old man characteristics. The perceptions mean only to reconstruct physical world by previsions on the matter of flash speed. I think; our senses seem to be massive, like unity of four basic forces, not being split at the beginning of cosmos long years ago. In the other words, there is an integration of senses. And, that is why we had lived in a “silence” world. We experienced an exhaustive “resolution” period that lasted thousand-years. And later on, the hundred-years lasting period of being is outlined. Skeleton of Lucy is one of the many thousands years-old coevals in Africa. Not seeing the underneath of a stone on the ground makes Lucy nervous. Like; a theory deals with a consciousness of spatial continuity in the mind of Piaget’s (Piaget 1999) babies as later on consequences. Like; emerging deep discomposureness of baby when mother is out of his perceptional space as a consequence of that feeding bottle is being made

ready in the kitchen and baby crying. Somehow, Lucy has a feeling that she could not able to explain.

What does it happen to the rock on the ground where the rock is settled? This feeling let her curiosity. And then, the curiosity let a new kind of interactive domain within the stone. If all senses are compound, the procedure of licking, rubbing, listening and smelling has been repeatedly done in a way unordered flux and reflux period.

And the stone moves slightly at the moment. Lucy seems confused. The problem correspondingly is a result of the stone shadow that is also in motion. The sense of the reason for dislocating of the stone differentiates itself. Lucy starts to feel that the reason of dislocation is the unseen part of the stone.

Today; if we have an initial concept of “under”, we could consider that the concept of under is outlined from this scenario or suchlike ones. Knowledge is exactly absorbed by direct human-being activeness; like milking.

I would like to end up the presentation with another Lucy case. How could Lucy’s first interaction happen to the pebbles on the table? To touch, grab by hand, lift up and then wrap by using rope as a “tool” with naval knotting. To waggle… A transformation from interweave to knot… knot to mesh. To carry the net of mesh.

Next step is to think of the existence of organic characteristic of mass like tomato growth. And to determine the further position of the mass becomes critical.

So on.

Compass never resembles the circle…

References;

1. Bak Per (1997), How Nature Works, Oxford University Press, Oxford UK

2. Piaget Jean, (1999), Child Visual Evolution, Papermoon Books, NewYork, USA

3. Güvenç Kenan (2005)(unpublished book), Roundness of The Pebble-On The Design-Politics of Human Mind.

EXPERIMENTAL AND CREATIVE DESIGN METHOD FOR THE FIRST YEAR ARCHITECTURAL DESIGN STUDIO

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ABSTRACT

Introduction
Our design studio is described as process-oriented approach. Small and simple functional problems could be subjects of this design studio. It can contain small and simple projects, such as a house design, kindergarten, cafe or a bookstore. In our approach, to support the final design, we decided using the semester as a whole by dividing into different problem solving small projects that can result in a much complex design problem.

Method
Our main aim was to give to students about spatial and volumetric compositional thinking and perceiving. The initial step of the practiced method is to use some concepts shared by visual arts and architecture, such as, balance, continuity and domination. After that, we asked students to create some compositions in two and three dimensions considering the given concepts. In the later step, we tried searching these concepts in worldwide famous artists', Malevich and Mondrian works. Then we chose some works of these artists and gave to students as a starting point to construct spatial and volumetric relations. Last step was to apply the way of thinking relations improved to the final design project.

Conclusion
This approach helped students to improve their visual thinking and to imagine how two-dimensional designs can be shaped in three-dimensional volumes while considering functional programs. They tried to learn the importance of color, composition and conception in architectural design. The colors used by students in their works supported the resolution of volumetric relations in their design process. This deductive method can be seen one of the initial step in architectural design education for further design investigations of the architecture students.

Key Words: Architectural design, compositional thinking, visual arts, problem solving, process-oriented approach

EXPERIMENTAL AND CREATIVE DESIGN METHOD FOR THE FIRST YEAR ARCHITECTURAL DESIGN STUDIO

Method

Students' awareness of their architectural design process is quite important. Achieving the awareness of design process depend on the students' maturity of manifesting compositional dynamics. This dynamism shows itself in graphical studies joining with students' individual creativity. So, creating and exploring imaginative forms in two and three-dimensional graphical studies is one of the main goals of architectural design education.

Dynamic fictions and images, both in architecture and in other arts, can be achieved by concepts of "balance", "continuity" and "dominance". In architecture and especially in modern paintings "balance" can be achieved by symmetry, asymmetry and radial inclinations. The concept of "continuity" can be applied by different methods depending on repetition, change, development and progress. "Dominance" can generally be easily identified when a form or group of form expresses itself strongly in a composition.
Compositions, which have an inner dynamism determined by the above-mentioned concepts, can be achieved with basic geometrical shapes. These geometrical shapes can be transformed as surfaces, planes and volumes, which carry the content of spatial relations. Students are creating their spatial designs by utilizing some of these elements in any level of the design process, in accordance with the necessity of each phase.

In architectural design studio one, students are expected to design compositions freely according to concepts explained above in the first phase. Second phase includes interpreting compositions of selected artists - Mondrian and Malevich- and then creating three-dimensional architectonic compositions related to internal dynamics of the artists' work. As third phase, this created three-dimensional architectone, which can still be considered as an artistic work, should be related with architectural realities and functions as: scale, function, ratio etc. In the fourth phase students prepare and present their designs as an architectural project. Last phase is to design a new project, which has logic of previous experience in a traditional urban form.

First phase: Introduction to concepts

Architectural design is a multifunctional phenomenon. It has many factors related with art, architectural design to construction. Architects can give various decisions according to conditions of design. Art plays an essential role in shaping decisions and it is integral part of architecture for many

years. The concepts, “balance”, “continuity”, “domination” can be accepted as fundamental concepts of both art and architecture (Doruk, 1973).

These concepts include sub-concepts, which support them. While concept of “balance” consist of “symmetry”, “asymmetry” and “radial”, continuity concept consist of “repetition”, “change” and “evolution”. However, the concept of domination can be seen any condition such as using color, forming volumes, organizing repetition.

In the first phase of architectural studio the concepts mentioned above is introduced to the students. Then they are expected to design compositions using color, plane, surface and volumes. Thus, together with the exercises base on planar and volumetric compositions, creativity of the students can be improved (Figure 1-2).

Students try to give an impression of architectural space and building in their compositions. Their training continues from two-dimensional works to three-dimensional ones. This kind of exercises free architectural students from traditional designing methods and give them an opportunity to use their imagination generously.

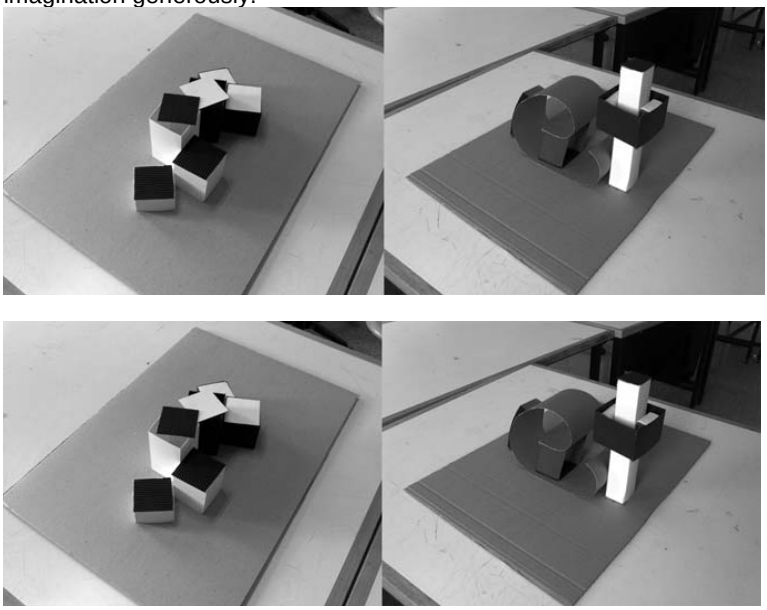

Figure 1. Balance and asymmetrical works based on volume and surface compositions.

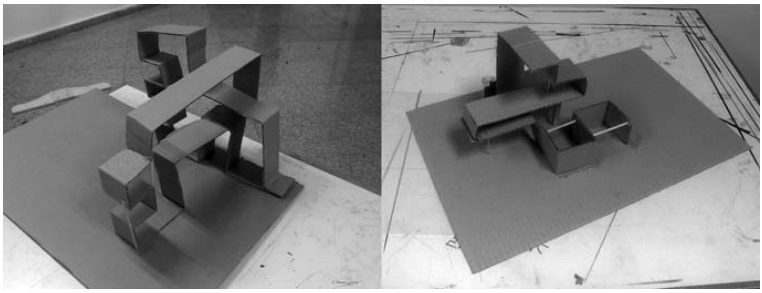

Figure 2. Experiencing spatial potentials of continuous surfaces.

Second phase: Volumetric interpretation of the modern paintings.

Formal elements can be classified in two groups: elements on a plane and spatial elements. Elements on a plane composed of linear elements and planar elements. Planar elements offer many training material for architectural compositions. Regular and irregular figures come together with many linear or nonlinear geometrical arrangements to emphasize the architectural dynamism (Chernikhov, 1931).

In the second phase of the design studio two famous modern painter's works – Kasimir Malevich and Piet Mondrian – are selected for interpreting as a three-dimensional experience. These paintings are proposed to the students which they have well defined composition dynamics and constructional order. Paintings also reflect the concepts of balance, continuity and dominance in a perfect manner and we can see the similar situation in using of colors. Students must consider the rules of organization of lines, planes and colors in paintings then should evolve the same logic in three-dimensional versions of the paintings (Figure 3-4).

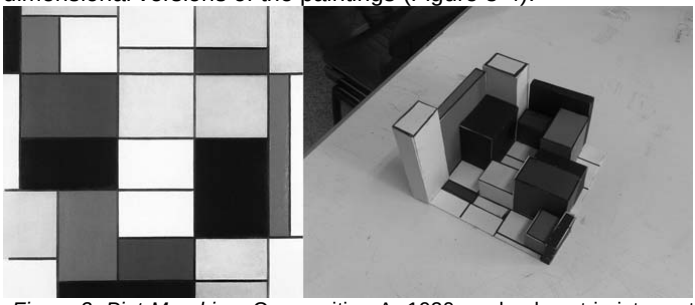

Figure 3. Piet Mondrian, Composition A, 1920, and volumetric interpretation by *Sedef Bozkurt*

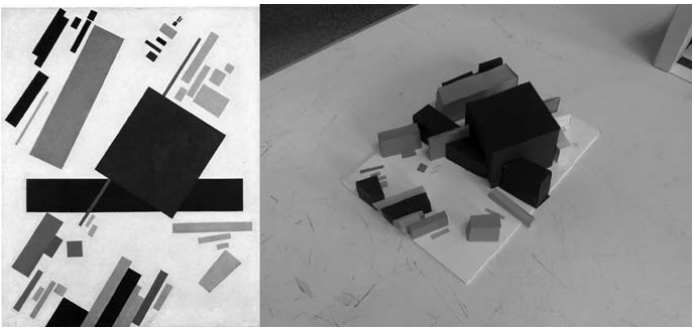

Figure 4. Kasimir Malevich, Suprematist Composition, 1916 and volumetric interpretation by Gevher Boyalı

Third phase: Realities of architecture: size, proportion

Subject of this phase is to determine a function to three-dimensional composition. After giving a function students must find the correct sizes for their compositions. Generally basic functions should be chosen, such as house, café, mini library, small art gallery etc.

Compositions of the students are still an artwork before giving it a function. Function separates artwork from architectural one. Artworks don't have a function in general. Architectural works depend on function and size. Without damaging the general proportion and the balance of the compositions, students should give a proper size to them (Figure 5-6).

Buildings are the architectural products which is experienced and lived. That's why their size should be suitable for human being. This normative structure of architecture and the building rules are reminded to the students and also they are major subject of the phase.

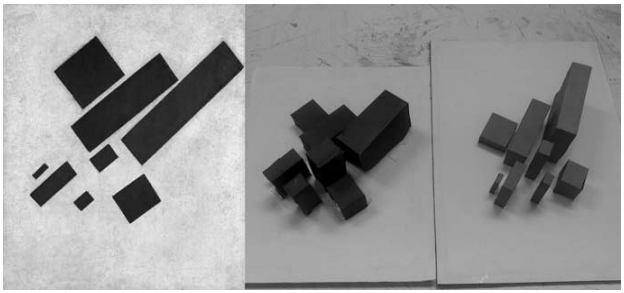

Figure 5. Malevich, Eight Red Rectangles, student interpretation. Project of *Şemiye Doğan*.

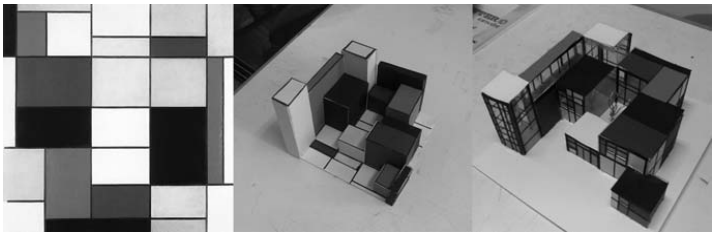

Figure 6. Piet Mondrian, 1920, student interpretation. Project of Sedef Bozkurt

Fourth phase: Study of composition as a building

Aim of this phase is the study of composition, which is given architectural function, as a building, as an architectural project. Each student focuses his composition and tries to design the spatial characteristics of the building. Critical moment is the reflection of the dynamism of the composition to the spatial solutions of the project. While designing the building they struggle to create meaningful, well sized, and well proportioned spaces.

Using of color is also important factor for architectural design solutions. Students use color compositions to separate spaces from each other and to emphasize the material solutions that is used in their projects.

Phase is finalized with the presentation of the project in orthographic representations. Logic of the presentation, which is expected from the student, should be similar to the sense of the project's composition.

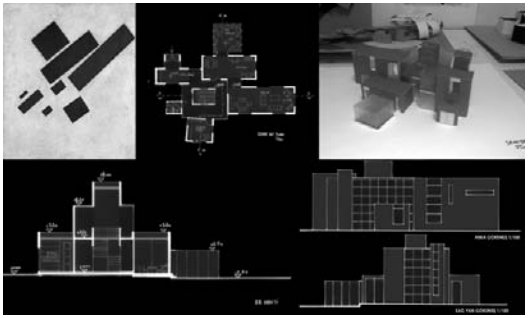

Figure 7. Şemiye Doğan, the House. Interpretation of Malevich's composition as a house.

Fifth phase: Applying same logic to a new architectural design

The final phase of the architectural studio is the effort of applying the previous experiences, skills and knowledge to a new architectural design solution. Thus;
A. To work in an urban space which has a special character,

B. To decide a function, which is suitable to the built environment,

C. To develop a dynamic composition – balance, continuity and domination – which is proper for selected function.

D. To consider the dynamics of artist compositions in previous sections and preserve the logic in new architectural solution are expected.

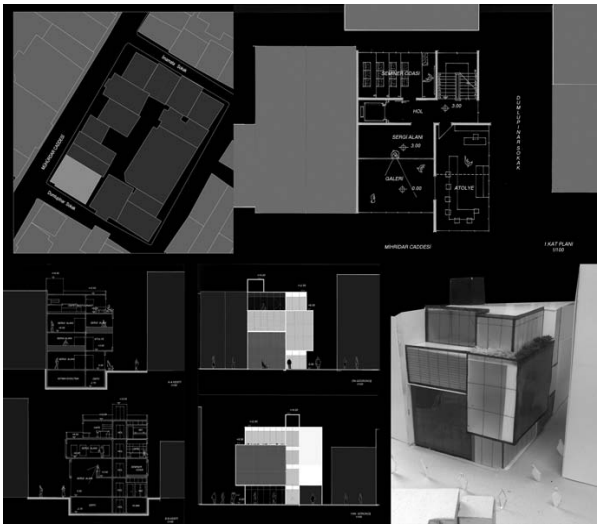

Figure 8. İrem Müezzinoğlu. Art Center at Kadikoy in Istanbul. Interpretation of Mondrian.

Conclusion

Architectural design studio has started with using concepts which essential for both art and architecture. These are used to support for creative process in architectural design education. Studio practically lasted in success as expected. Students examined their creativity by forming dynamic

compositions using basic geometric figures. Modern artist – Mondrian, Malevich – paintings are selected to support the creative process. Their works are introduced as a good carrier of the selected concepts – balance, continuity and domination. Then students produced successful three-dimensional architectons from them. With these experiences they noticed that they could rationalize spatial and volumetric relations of their projects maturely. At the end of the design process, students understood that they could bring together planes such a way that form a constructive composition, which depends on relative angles and proportions. They also understood that in preliminary stage, composition of planes offer constructive combinations for volumetric relations of the parts of the buildings.

In this respect, purpose of the architectural studio is helping students to improve their poor architectural ideas, to overcome lack of technical skills, to develop a sense of scale, proportion and unity in their projects for volumetric constructions, to overcome lack of rhythm and dynamism in the compositions of their designs.

References

Chernikhov, I (1931), *Elements of Form* in Papadakis, A, Cooke C and Benjamin A (ed) (1989) *Deconstruction, Omnibus Volume*, Academy Editions, London, UK, pp 48-50

Doruk, B (1973), *Mimari Tasarıma Giriş Programı*, ITU Mimarlık Fakültesi Baskı Atölyesi, İstanbul

Design Process Model with Student Participation in Basic Design Education

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ABSTRACT

Incoming freshman architecture majors, during the education process, begin to apprehend the different circumstance they encounter. Now, the formerly neglected space/environment relationship is nested with;

- observation,
- detailed analysis,
- problem detection,
- interpretation

In this context, the students' abilities to observe, to perceive, to interpret and to cope with problems pertaining to the expressions in Basic Design course are expected to be improved towards application. A variety of different thoughts and methods regarding that application are developed. Design Process Model with Student Participation is used in the First-Year Basic Design Education. Throughout this process, 4 phases are performed:

- Studio work
- Mid-evaluation in studio
- Homework
- Final Evaluation

In "Studio work", firstly, the students are informed on topic/concept. Then, synthesis studies on the given problems are expected to be carried out. Sketch Work which looms large in design process, provides the students with the opportunity of one-on-one discussion with the lecturers. At "Mid-evaluation in studio", the studies prepared according to designing criteria are evaluated. The students are encouraged to engage in course level assessment and argumentation upon chosen samples. Thus, comprehension of the topics is ensured. At "Homework" as the last application phase, the students provide materials for discussion on their own original interpretation followed by the presentation of their 3-dimensionally reconstructed studies. Throughout this process, their observations, analysis and problem detection studies should abide by criticism which takes place during studio application and mid-evaluation. "Final Evaluation" aims to rate the students' topic-related homework. Basic Design that serve as the basis for arts education would eventuate through application of conceptual expressions, visual and intellectual construction during fall/spring semesters of the first year. In this application: Within the scope of fall semester; the students in studio work are assigned problems consist of various elements such as point, line, plane, volume, measure, ratio, color, space and texture. With these, the students are expected to attain skills relevant to equipment usage, geometrical composition and expression and communication process and designing. Within the scope of spring semester; the students are taught to recognize the relationship among pieces besides Gestalt Theory and design principles. During this process, the students are required to transform

concrete concepts into abstract concepts. In both studio and homework applications, the students are expected to come up with designs which emphasize their levels of opinion, information and aptitude along with original solutions. The aim of this paper is to investigate and assess the implications of Process Model with Student Participation as an education method in relation to its positive contribution to the students' abilities to cope with the problems which they are more likely to encounter during topic comprehension/perception, analysis and synthesis phases. Since they participate in direct study evaluation, the students tend to yield information accumulation besides the improvement of acuity, comprehension and systematic cogitation. For this purpose, the students are required to become more active via participation. Furthermore; scope of the course, its presentation methods, comprehensibility and final achievement reflections are illustrated by the data obtained from survey questionnaire at the end of each academic year.

Keywords: *First Year Design Education, Basic Design, Student Participation, Design Process, Learning Process*

Design Process Model with Student Participation in Basic Design Education

Introduction

Most of the current elementary and high school curriculums in Turkey do not include theoretical and practical knowledge to be used during undergraduate architecture programs. Students with elementary and high school backgrounds mainly based on memorization and repetition are enrolled in architectural education programs. Most students with such backgrounds experience an enormous hesitation through orientation in higher education environment that aims at inquiry and creative thinking. Especially, when inquiry-based architectural education with constructive and creative aptitudes is matched with a student group which takes the lecturer's every instruction as given; students' comprehension of the education becomes even more difficult (Erkan, 2006).

The students' "awareness of what to design" within basic design education becomes highly crucial. They tend to be seriously floundered upon encounter with basic design courses and to experience lack of self-expression. In Turkey, "Basic Design Studio", as the place where digital information-based student community comes across design education for the first time, plays an important role in comprehension of design process for the students through eliciting self-disclosure and learning to think constructively.

Although a variety of methods have been applied in Basic Design education, they basically aim at increasing the student's ability to "perceive" and to "learn to think".

In this context, the students are expected to cope with various aims/circumstances in "presentation/expression" via learning "a new language" as a means of communication beside others they have already known.

The following main concepts are needed to maintain communication and comprehension for architecture:

- observation,
- problem detection,
- detailed analysis,
- interpretation

Basic Design course is planned in order to provide the students with the basic components and principles of architectural organization information (Divanlıoğlu, 1997).

Throughout this course, abstraction of the concepts with which the students become familiar for the first time is achieved via inquiry, observation. This process is reserved for the exploration of architectural language.

The latest discussions regarding architectural education reveals the importance of learning by exploration in terms of creativity. Because, learning by exploration is clear of any type of conditioned responses, memorization, imitation and replication (Gür, 2000). As matter of fact, the student's each design study brought forth by exploration is considered an invention per se. That invention provides the student with the opportunity for self-recognition and self-disclosure.
The main aim of this paper is to determine which paths should be followed by the student throughout their exploration, what to be explored and where.
For this purpose, requisite infrastructure to facilitate voluntary and creative designs of the architect candidates with basic
conception manners creative designs is prepared.

Materials

Communication in architecture is achieved with the help of drawings and models. In general, the students start out by getting familiar with line and using it from the beginning of their education.
Therefore, the expression initially formed by point-line experiences since the first lecture leads to a development their presentations through model studies in the sense of transition into 2 and 3-dimensional planes and volumes.
Also in Basic Design course; the students should clarify architectural materials and their purposes of usage and on a regular basis, despite the fact that those might have formerly been used for different purposes.
In this model, directly used materials, course description-related topics and information obtained from them are transformed into 2 and 3-dimensional outputs by students and lecturers with the help of various supplies (colored paper, glue, utility knife, scissors, sketching paper etc.)
Design studio materials consist of several study equipments that students utilize such as technological devices (PC, projector, etc.) and drawing board.

Design Process Model with Student Participation in Basic Design Education

Architectural practices overrate "learning-by-doing" and "trial and error".
In that context, the student's abilities of observation, perception, interpretation and problem-solving regarding the expressions in Basic Design course are expected to be improved towards application. Critical approaches following those practice-based approaches play a crucial role during discussion period.
Regarding this practice, various opinions and methods are developed. The applied model in the First-Year Basic Design education is called "Design Process Model with Student

Participation". This process is performed in 4 phases;

- Studio work
- Mid-evaluation in studio
- Homework
- Final Evaluation

In "Studio work", firstly, the students are informed on topic/concept and in studio; they are expected to perform an analysis-synthesis study on a given problem, namely "scenario question". Furthermore, in this phase, design sketch which looms large in design process provides the students with the opportunity of one-on-one discussion on preliminary sketch studies with the lecturers.

Scenario question would be defined as the explication of a given theme within course subject. For instance, following the explication of "balance" as one of the main principles of Basic Design course, as scenario question, the student is requested to come up with a design with the inquiry of "I" concept. The objective of the students here is to constitute the topic which they comprehend and contemplate on in correspondence with a given concept, rather than direct installation. Accordingly, studio mid-evaluation determines the adequacy of student's comprehension of the topic (Figure 1).

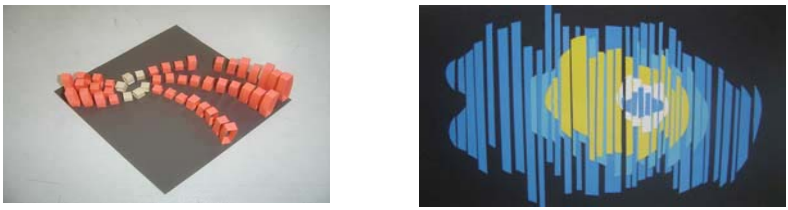

Figure 1. Student's interpretation of "I" concept in "Balance" principle

In "Mid-evaluation in studio" phase, the assignments prepared in accordance with design criteria are evaluated. Studies that are performed on the chosen samples enable further evaluations through discussion forums with student participation. Student's comprehension of the topic is aimed here.
A proper and accurate conception of critical approach within architecture, design and especially studio/education environments, consequently the basic characteristics of this approach such as exploration, awareness, learning and enabling the innovation path are crucially important (Şentürer, 2004). Therefore, due to critical approach within discussion environment the

students also seize the opportunity of self-inquiry for their homework with the help of rational-thinking and awareness.
“Homework” is the last practice phase. In accordance with the critiques and the newly-given problems during studio practice and mid-evaluation, students visualize their works 3-dimensionally and prepare presentations relying on in their own original interpretation in the next lecture.

“Final Evaluation” is the evaluation of the homework.
The output of this 4-phased process provides a basis for students to detect possible problems within any given topics, to channelize their thinking in appropriate directions via observation and to foster an innovative conception and discussion forum regarding those problems. At the end of this discussion environment, the students are expected to attain full comprehension of the given topics and concepts.

Student Satisfaction Questionnaire
Student Satisfaction Questionnaire (SSQ) is a survey aimed at operational improvement of Basic Design course and learning process. SSQ (Appendix 1), which has been performed during a consecutive period of 5 academic years so far, includes a group of close-ended questions with respect to course planning, evaluation criteria, communication and course lecturers.
Questionnaire is evaluated by using statistical analysis software SPSS version 15.
Questionnaire study is comprised of totally 3 sections: Namely; Section 1, Training Programs and Education (11 questions); Section 2, Measuring and Evaluation (8 questions); and Section 3, Communication (1 question).

Results
In Turkey, Basic Design education which forms an interface within a transition process of architectural education for the students of digital-based education system aims to foster certain attributes such as rational thinking, synthesis, inquiry, exploration and decision-making.
For this purpose, in the 5-year questionnaire evaluations without altering curriculum of Basic Design course; the interval of academic years 2004-2006 with prevalence of ‘Classical Education Process’ and the interval of academic years 2007-2008 with experimentation of ‘Design Process with Student Participation’ are compared, thus Student Satisfaction Questionnaire results for Basic Design Course are shown below (Table 1, Table 2, Table 3).

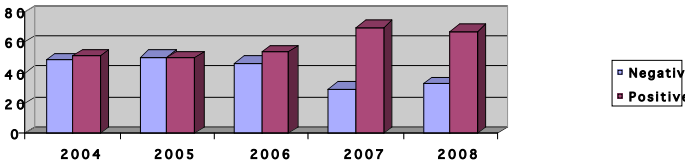

Table 1. SSQ, Training Programs and Education Analysis

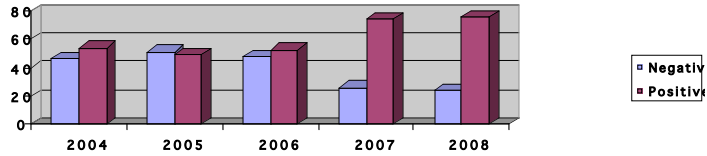

Table 2. SSQ, Measuring and Evaluation Analysis

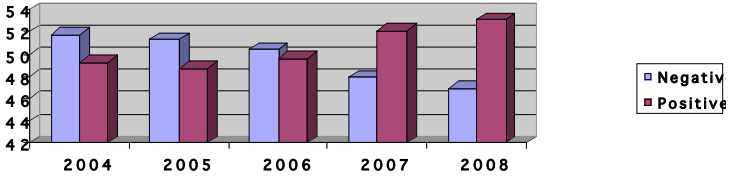

Table 3. SSQ, Communication Analysis

Conclusions

Various methods are being used in Basic Design education. Basic Design education would be given through classical and theoretical methods, and also through different disciplines such as drama, theatre, literature and theme.

Regardless of the methods used, it is certain that the students with backgrounds of digital information-based education are much likely to experience difficulties in Basic Design course. However; information transmission into architectural project, students' awareness and adaptation

to architectural education are accelerated by the experimentation of 'Design Process Model with Student Participation'.
Students tend to learn the design process much more rapidly and at a higher quality level within critical environment.
Design Process Model with Student Participation induces the students' to delve more deeply into a given problem, to criticize and to improve their architectural language.
Discussion environment encourages the use of those design methods such as sample-repetition-based, problem-analysis, sketch work and modeling accelerates the design-to-product process.
Discussion environment in studio and the critical approaches give way to curiosity-driven questioning, exploration and consequently, activate "perception" and "contemplation". Nonetheless, they evoke awareness, creativity and formation of architectural language.
It is essential for a lecturer to keep up the recent developments in Basic Design concepts.

REFERENCES

Divanlıoğlu, D (1997), *Temel Tasar Tasar'ın Öğe ve İlkeleri*, Birsen Yayınevi, İstanbul

Erkan, D Ç. (2006), *Temel Tasar Eğitimini Sorgulayan Bir Araştırma*, YTÜ Yüksek Lisans Tezi, İstanbul, pp: 1-2.

Gür, Ş Ö (2000), *Mimarlıkta Temel Eğitim Dersi*, Mimarlık Dergisi, No 293 pp 25-34.

Şentürer, A. (2004), *Mimarlıkta Estetikte Tasarımda Eğitimde Eleştirel Yaklaşım*, Yapı Endüstri Merkezi, İstanbul pp:9.

Appendix 1. Student Satisfaction Questionnaire Form

BASIC DESIGN COURSE STUDENT SATISFACTION QUESTIONNAIRE

TRAINING PROGRAMS AND EDUCATION						
		Never	Hardly	Sometimes	Usually	Always
01	The course is theoretically sufficient.					
02	The course is practically sufficient.					
03	A course description and syllabus is handed out at the beginning of the semester.					
04	Course-related references are suggested.					
05	Course-related field / laboratory / practice studies are sufficient.					
06	Theoretical and practical activities participated by the students meet the aim of the course.					
07	The aim of the course and expectation from the students are declared.					
08	The course is useful and necessary in terms of career development.					
09	Concepts presented in the course are in compliance with course title.					
10	References suggested and used are in compliance with the course description.					
11	Methods of measuring student performance(examination, homework, etc.) are in compliance with the course description.					
MEASURING AND EVALUATION						
12	The questions addressed during the course are fully understood.					
13	Student performance measuring and evaluation performed by lecturers are unbiased.					
14	Beside examination, homework and practices are also taken into consideration for evaluations					
15	The course provides the student with the ability for comprehension of field-related problems and problem-solving skills.					
16	The course provides the student with method development skills for coping with possible obstacles.					

SOUL SEARCHING – SHALL WE DANCE?

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ABSTRACT

Foundational year in architecture education always has this question of what actually makes a good foundation to build upon a future designer? Is it craftsmanship skills? Is it strong reasoning? Is it sensitivity to beauty? Or is it all of those things?

Those in earnest pursue for beauty will in time realize that while craftsmanship is vital to the creation of beauty, it will soon become merely a tool for repetition of things if the skills are not accompanied by wonder and curiosity for things that have never been encountered with before. And those in earnest pursue for beauty will also in time realize that there is more than reasoning for there are things that cannot be uttered in words, and that beauty relates to human emotion.

The more we look for beauty, the more we realize that it is more than just the visuals, the key is not to look at things but to look through them. It is about experiencing things.

Experience means moving, and being emotional means being moved (Bruno, 2002). How do we hone this emotional side in the initial process of forming a spacemaker? Movement is the element that relates space and time. Experiencing space is about moving in space and being moved by space.

This paper will look at how the understanding of movement relates to the process of spacemaking and how it could help architecture students in their foundational year grasp the idea of experiencing space and thus hone their sensitivity to the non-visual elements of beauty. It will discuss how other form of arts which concern mainly with body movements initiate their education for future artists and how coordination with time and space are exercised.

A studio's projects, Working and Dwelling Space for a Dancer, will be examined and discussed to see how the concept of dance composition can be translated into an organization of space and how the understanding of movements and the aspect of narration in the respective dance composition helps student to understand the idea of moving in space.

It will study how in a culture where dance is still an essential element to the many rituals and daily life of the people, the knowledge of traditional dance compositions would not merely be helpful in understanding local culture but it is crucial to find the spirit of the place and to continue the process of spacemaking.

Keywords: *movement, dance, rhythm, space, emotion*

SOUL SEARCHING – SHALL WE DANCE?

1. Rhythm: Body, Space and Time

Rhythm has its way of regulating time and space that even chaos acknowledges its presence whether in a larger or smaller scale. It directly connects with three of our senses; hearing, sight, and touch. The senses of smell and taste are naturally linked with permeating elements although they are in fact rhythmically used by the regulating system of our breath or the mechanism of our oral cavity.

We can automatically feel rhythm with our sense of hearing, and frequently without the agreement of our conscience our body would move as a response to it. The relation is not the same with rhythm acquired by sight, our body does not automatically move to visual rhythm as it does to audio rhythm. Rasmussen (1959) has mentioned how Eric Mendelsohn and Frank Lloyd Wright had connected rhythm of music to their architecture. While Mendelsohn would need aspiration from Bach's to release his creative imagination and see architecture in great visions, Wright would hear music in his ear when he was moved by stirring architecture sights. But still to Rasmussen it did not explain clearly how the visual and audio rhythm are actually connected.

The connection between our sense of touch to audio rhythm may not be difficult to understand by those who play musical instruments. The parts of our body in fact do not require rhythmical audio in order to be able to move rhythmically, as evident in the case of our senses of touch and taste. Our everyday activities; our habits, rituals, and ceremonies; consistently reveal to us how we faithfully perform the rhythm of life.

Levebvre (1992) defines rhythm as the constituent that reunites the quantitative aspects and elements, which mark time and distinguish moments in it – and qualitative aspects and elements, which link them together, found the unities and result from them. Music is work of art with what we can easily understand how rhythm connects the quantitative and the qualitative. Surely other works of art do have some sort of connection between the quantitative and the qualitative, but music is work of art that touches even the simplest being. Though Levebvre criticized musician for too often reducing rhythm into plainly quantifiable beats (des mesure), still a simple person can feel the rhythm of music raise a certain emotion within his soul. The matter of whether the process of creating a certain piece of music starts from the quantitative to the qualitative or from one's feeling and emotion into the form of a measurement will, for this moment, be left to the authority of those who deal directly with such works. This paper will focus on how the spatial dimension created by rhythm is experienced by a person.

Architecture and dance have common denominators: body, space, and time. For a dancer, his/her own body is the medium to express aesthetic

conceptions, thus dancers have the sensitivity to movement and space that is exclusive to their art. While architecture is to be lived by all, the sensitivity to movement and space is crucial for architects to create spaces that can touch human soul. Architecture is not merely to be seen, but fundamentally, it is to be experienced.

Many would be quick to comment that dance has a transient element in its nature, which is true if it were only within the boundary of stage arts, but for some cultures where dances are parts of the religious rituals and cultural ceremonies, dances are about values strongly held by the people and thus have a prolonged life time, as long as the beliefs live. When a community is still relatively homogeneous, the products of life including dance and architecture would tend to share common values, especially if the lives of the people are united with the same spiritual beliefs. Spiritual belief always acknowledges some sort of authority which will automatically bring into being the power of governing on the lives of the believers. While this paper is not suggesting anti infiltration in culture, which is impossible in any way and at best would only prohibit the process of enrichment in a culture, it is strongly proposing that the process should be incremental to sustain the harmony within the lives of the people. Therefore this paper is trying to look at how that kind of process could be executed.

In a culture where dances are parts of the rituals and the everyday lives of the people, looking at the traditional dances is another way to look at how space is created without sacrificing the values held strongly by the people.

2. Studio Projects

In this studio, students were asked to design a working and dwelling space for an artiste of a certain traditional dance and the students were given the liberty to choose any composition (Note: the students were given caution not to select a composition that is developed solely for tourism purposes). The process was begun with a task of making several visual abstractions from the chosen dance composition which could be about the movements in the composition, the emotion that is aroused from the dance, the space created, or other factors and ideas the students could get from their research and observation. The abstractions started with black and white, and then colored two-dimensional compositions, followed by abstractions of three-dimensional compositions.

In the second phase of the process, all discussions about dance were stopped and the students were immediately introduced to a new topic of site reading. They were instructed to first ‘feel’ the site for their project with other than their visual sense and then continued on with the process of site analyzing.

Discussions about the dance compositions were brought in again when the students started their design projects (students were asked to choose a 400m2 lot from the site with considerations for the nature of their personal dance compositions).

2.1 Project 1

This project is based on the composition of a Balinese Mask Dance (Tari Topeng Keras). The dance is the opening piece of a series of mask dances and it is played with a single character of a prime minister. The student first grasped the importance of the mask in the composition as an element that transforms the true identity of the dancer into another character (the series of these mask dances were originally played by only one dancer who would use several masks to transform him into multiple characters), as he visualized it in the black and white 2D composition (Fig. 1). In one of the colored compositions, the student also recognized that when the dancer transforms into another character it is actually a process of spiritual transition, a process where the boundaries of tangible space disperse into another dimension (Fig. 2).

Figure 1. 2D abstraction with charcoal from Project 1

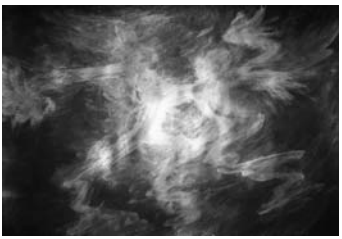

Figure 2. 2D abstraction with colors from Project 1

The 3D abstractions from the mask dance were produced with several compositions of wooden blocks, chosen by the student to convey his understanding of the dancer's staccato movements.

The role of mask in the dance composition was later translated into elements of building or landscape that cover certain private areas in the project. The gesture was not merely symbolical but it was also to create a feeling of space that is pressed and covered as the body space of the mask dancer as he performs the composition (Fig.3).

The organization of spaces was more fluid than the traditional composition in a common Balinese dwelling space which is governed by Nawasanga nine squares. The fluidity of the spaces apparently first came from the

observation of the movements in the dance composition. As the student continued on with his research he identified the fluidity of daily activities and religious rituals in the lives of Balinese people, thus the necessity to have flowing spaces became essential. Though he proposed an organic composition of space, the traditional Balinese principles of organizing space were still applied unto the whole structure.

Figure 3. Project 1 model

This student's project is based on the Serimpi dance, a Javanese dance that is usually performed by four young women. It is a dance purposely composed for entertainment, hence the reason for the young women. It is for displaying beauty and elegance. The Serimpi dance was originally performed in the Sultan's palace or Keraton, for royal events such as weddings, the birth of a royal successor or ceremonies for circumcision.

The dance is without a certain narrative but the elements of it do symbolize things and beliefs as it is commonly practiced by the Javanese people, so the number of dancers in this piece is to represent the four elements (earth, wind, fire and water) and also the four winds. The characteristic of this dance is especially featured by the remarkably unhurried pace of the movements. Haste is not considered to be elegant nor erudite in Javanese culture, and even more so for women. The slow movements in Serimpi dance are only occasionally punctuated by either strong or quick movements of the hands and fingers.

These characteristics of the dance were perceived by the student as constrained movements which she first visualized it in her black and white 2D composition (Fig. 4). Her colored compositions illustrated light and flowing movements, the feminine features of the dance (Fig. 5).

She translated those features into her design as spaces that are rigid, symmetrically organized, and very spacious. The spacious feeling was necessary for her to emphasize the slowness of the movements. During the process she continued to add heavy elements and large surfaces in the design (Fig. 6 and 7).

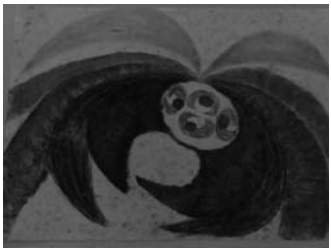

Figure 4. Black and white 2D abstraction from Project 2

Figure 5. One of colored 2D abstractions from Project 2

Though her design might have certain visual similarities to that of a traditional Javanese dwelling, she actually had omitted the traditional visual symbolisms and created spaces with the pure essence of Javanese daily rhythms.

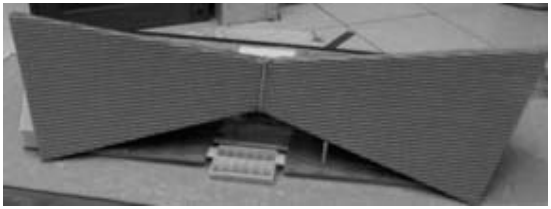

Figure 6. Design exploration from Project 2

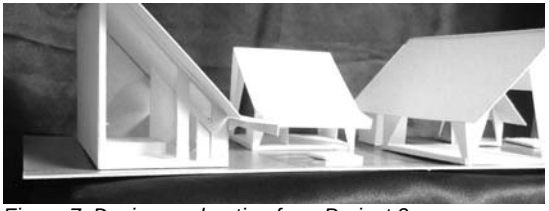

Figure 7. Design exploration from Project 2

2.3. Project 3

Oleg Tambulilingan is the dance which this project was developed. Despite its much resemblance to the traditional Balinese dances, it is relatively a modern dance, created in the 1950s. It was choreographed for a performance and does not have any religious dimension. The composition was developed from a story of mating bumblebees hence the dance is usually performed by a male and a female dancer.

Figure 8. 2D abstraction with charcoal from Project 3

Figure 9. 3D abstraction from Project 3

The student's 2D and 3D abstractions showed how she took in the process of chasing in the story and the importance of how the dancers' attires sweep about the space (Fig. 8 and 9).

Later in her project, the student created spaces that were enveloped by flowing and sweeping surfaces. The interaction between indoor and outdoor spaces was made intimate as though a process of mating in the open air (Fig. 10 and 11).

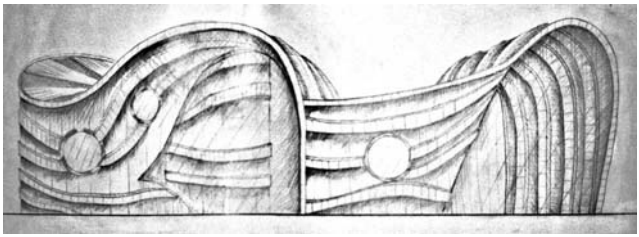

Figure 10. Project 3 front elevation

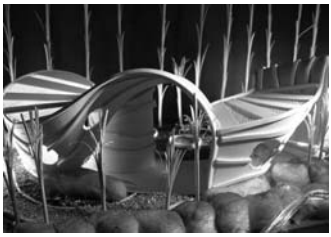

Figure 11. Project 3 model

3. Dancer's Space

How dancers understand the spatiality of their body movements now might have changed from the way it used to be understood by traditional dancers. For one, the way traditional dancers practiced was different than that of their contemporary counterparts. While the contemporary dancers might need mirrors to see how they dance, the traditional ones had to rely more on the senses of their body as the body strived to attain certain positions or moved from one position to the another, due to the absence of mirrors in their time. But that was essentially the original purpose of teaching the art of body movements, to sharpen one's senses.

Dancing used to be part of the education of an ideal character. For the Javanese, an ideal character would be one who can handle his emotion by having total control of his body movement and pattern of behavior (Kusumo, 2004). In the interpersonal relationship, the ideal character would always let the other person take the initiative, almost totally passive and be easily embarrassed if acted outside the norm.

The Indonesian word for sense, feeling and taste; rasa; is actually used not only for describing one's emotional side but it is also used to convey what one thinks. Thus the colloquial term "saya rasa…." does not necessarily mean "I feel" or "I sense", but most of the time it also means "I think". Although the Indonesian language does have a specific word for "think", the use of the phrase "I think" would sound rather judgmental, while "saya rasa" would express wisdom and spiritual guidance.

Values are deeply ingrained in the traditional dances that even in a setting of a modern dance school, the practice of traditional dances would not have much advantage in having any mirror in the practice hall. For example, in Javanese culture it is not considered polite to look directly at person, therefore in traditional Javanese dances it hardly ever occurs to the dancers the need for looking straight at something. The understanding of "wiraga, wirama, wirasa" (to be in control of one's body, to be in rhythm and to sense) requires the dancer to heighten the sense of his or her body, which would actually be easier when one lowers her sense of sight. In the case of Balinese dances, the movement of the eyes is as important as the movement of the body, therefore the emphasis is not on what to look at but on the expression of the eyes.

While the philosophy of Indonesian traditional dances requires a total unity of the personality of the dancer, it is not to be mistaken as individuality without any association to a larger community. Sardono Kusumo (2004) in his writing, titled Bahasa Diam (Silent Language), states the importance of a dancer to not be too in-dwelled in his own personal expression. Not only it will result stagnancy in the development of one's dance, but it will also give negative impacts to other dancers and prevent the advancement of the art itself as a communal experience. Kecak Bali, Malulo Sulawesi or Seudati

Aceh are examples of traditional dances that can gain the spirit of collective unity. Those dances cannot be enlivened unless each dancer is aware of the expression of his surroundings; those of the other dancers', the musicians', and the audience's; and this awareness is gained not by heightening the sense of sight, but by intensifying their sense of rhythm, through the motion and through the sense of hearing.

The late well-known Balinese dancer, I Nyoman Pugra, said one time that a good dancer is one who also plays gamelan, knows how to make his own costumes and masks, and knows his literature; but above all that, the best dancer would be one who is also a farmer, for a farmer always knows the rhythm of nature. It is interesting to read the account of how he traveled abroad and experienced foreign cities, how he would just have his eyes closed the entire time and simply listened to the sounds around him. His eyes would be lifted up only when there had been an interesting sound or rhythm.

Pugra's way of experiencing those foreign cities resonates with what Pallasmaa (2005) calls the acoustic intimacy, the connection between our sense of hearing and the space around us. Unfortunately, as commented by Pallasmaa, much of this relation has been severed by the advancement of sound system technology, and now by the advancing digital technology; the easiness to download digital audio files and have them played in any place. In any modern urban setting, it is becoming a more and more ordinary sight to see people dwelled in their personal audio space provided by the bright colored ipods.

4. Revisiting Project 1, 2 and 3

Did the students capture the rhythm of their dance compositions? If they did, was it the quantitative or the qualitative aspects of the rhythm, or both? How does the rhythm of a dance composition overlap with the rhythm of life of the dancer?

The ways students approached their dance compositions in the design process can be categorized in four ways:

1) applying the movements in the dance composition to the mechanic movements in their design, for example: the sliding movement in Serimpi dance (Project 2) was transformed into sliding doors and windows. The student in Project 3 attempted to use rolling doors in her design but later the idea was abandoned because it was considered too mechanical and did not fit in with spaces which were supposed to be intimate and sensuous. (Note: It was one of the objectives of the studio's program to have students understand the interaction between human and building parts);

2) using the spatial composition of the dance; project 2 and 3 demonstrated this approach more clearly than project 1 because in the 2nd and 3rd projects the dances are performed by multiple dancers which made it easier for the students to see the geometry of the space. In Project 1, the student in fact also applied the spatiality of the dance composition, but as his dancer was a solo performer it was more difficult to verify the accuracy of the geometry, as is always the case when only movements of one entity is examined.

3) using the narrative element of the dance composition to give certain characters to the design project; In Project 1 the student used the brevity of the prime minister to develop a composition of space that was defined by layers of barefaced surfaces, as he also tried to establish the multiple characters of the masks concealing the true identity of the dancer. In Project 3 the story of mating in nature has given the designed space an intimate relationship between indoor and outdoor spaces.

4) applying the characteristics of the dance to the design project; whether it is more feminine or masculine, whether it is accentuated by details in certain parts, whether the rhythm is dynamic, or whether the rhythm is more flowing or thumped.

All three projects show that the quantitative element of rhythm was left unexamined by the students which may have been resulted by the fact that they are not professional musicians and have little theoretical knowledge about musical rhythm. Project 2 student did use quadratic geometry in her design, and although Javanese music does use the 4/4 rhythm, the use of those geometries was developed more from the spatial composition of the dance. The quantitative aspect of rhythm was at the most taken in as the element that defines the tempo, whether it is vibrant or moderate. But the quantitative aspect might as well have been overlooked in all three projects because all arts are to be experienced and not simply measured, and that may have been the way the rhythm of the dances was understood by the students.
Whether the rhythm from the dances would be harmonious with the daily life rhythm of the dancers will be difficult to verify as long as the projects remain un-built. The special rhythm of spaces in Aalto's student dormitory (Rasmussen, 1959) can only be felt when the building had been occupied and lived. What Pallasmaa calls the acoustical volume of space can only be attested when all construction has been built and the materials start to echo the life of the occupant.

5. Closing

In the last chapter of his book, Rasmussen portrays the acoustical dimensions of space and explains how easy it is for us to take the impression we receive by sight as something that is unconnected to our sense of hearing. Pallasmaa continues on with this subject in his own seminal book, illustrating the danger of reducing and restricting our perceptual system to the visual sense alone. The current situation in our contemporary designed spaces demonstrates that more spaces are actually dominated or at least shadowed by audio spaces that are unconnected with the visual environment. The recorded programmed music played in public spaces such as shopping malls or elevators, or the personal music provided by ipods, or even the conversations we have over the cell-phones, all has created audio spaces that are not synchronized with our visual surroundings. A designed object has to be a total whole and to be experienced as a whole. As complex as our perceptual system is, so is the complexity of all works of art.

In closing the chapter of Hearing Architecture, Rasmussen justly says,

Though it may be objected that, at any rate, you cannot hear whether or not it is good architecture, I can only say that neither is it certain you can 'see' whether it is good or not.

Foundational year in design education is a remarkable time when all elements suddenly seem to collide; new and old, fresh and steady, haste and keen. And of course, the new and new, old and old, haste and haste, and so on. Where do we start in times of such collision? Where do you want to start laying the foundation? And out of what? The necessity for some sort of framework co-exists with the need for liberty to go beyond that framework. It is a time when one wishes that everyone were a gifted jazzer, or a gamelan player in the context of Javanese culture, where anyone can set a tune and everyone else follows in without ever fearing of altering the tune at any given moment.

References

Bruno, Giuliana (2002), Atlas of Emotion, Verso, New York, USA

Geertz, Clifford (1973), The Interpretation of Cultures, Basic Books, New York, USA

Kusumo, Sardono W (2004); Hanuman, Tarzan, Homo Erectus; ku/bu/ku, Indonesia

Levebvre, Henri (2004), Rhythmanalysis, Continuum, London, UK

Pallasmaa, Juhani (2005), The Eyes of the Skin, John Wiley & Sons, Chichester, UK

Rasmussen, Steen Eiler (1959), Experiencing Architecture, The MIT Press, Cambridge, Massachusetts, USA

THE BATTLE OF GRIDS: PREPARING FIRST YEAR STUDENTS FOR THEIR UPCOMING DESIGN STUDIES IN JORDAN

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ABSTRACT

Abstract
Basic design is expected to prepare students for their upcoming design studies. In Jordan it is also expected to substitute for the lack of a proper art and design education in schools in general. Out of their years of experience in teaching basic design, the current authors designed and developed a project that they believe it reorients the first year students towards the nature of design studies, empowers them with the required basic skills, and expose them to different aspects of design. “The Battle of Grids” spans over eight weeks with six stages introducing the students to the basic design elements and notions.
The project produced highly acceptable results that were commended by all external examiners. The students showed developed skills in later projects. Some even made direct similar approaches in their later designs and achieved quality results.
The project, as a part of a structured curriculum, was implemented for two years on the students of the German Jordanian University. It was evaluated through surveys among educators and students who participated in the implementation process. Both parties commended the project; and the survey indicated some aspects to be enhanced in later implementations of the project.

Keywords
Basic Design, Grid, Architectural Education

THE BATTLE OF GRIDS: PREPARING FIRST YEAR STUDENTS FOR THEIR UPCOMING DESIGN STUDIES IN JORDAN

Introduction

All over the world basic design education models in general are still affected and are run in accordance to the model proposed by the Bauhause during the last century. This influence was either direct through establishing schools all over the world by the Bauhause educators and its graduates (as in the case of NID, Ranjan 2005), or by the publication efforts that helped insuring a leading role for the Bauhause school of thought in general (Boucharenc 2006, and Ranjan 2005).

The objectives, teaching strategy, and basic premises stated by Johannes Itten (Ranjan 2005, and Itten 1965) represent the basics intended for any foundation course in general and are still applicable. New trends affected by new technology now add time-based design through computers to basic design education (for example see Stewart 2006 chapter 12).

The use of computers in basic design raises many questions concerning the development of the manual skills of the students and respectively their visual-self expression capabilities. Many architectural programs offer CAAD courses in the second semester of the first year or in the first semester of the second year.

In Jordan, and maybe in other neighboring countries, the high school design-and-art-education (in most of the national-governmental schools) fails to prepare students with the minimum tools needed to join a design course. Some students don't even know what architecture and design are. Art classes at schools are sometimes substituted by math, physics, or other subjects because art is looked upon as an inferior subject not needed to pass the high school national exam (Tawjihi). For some, and due to certain cultural backgrounds, visual art is not even considered as an acceptable subject when it deals with the human or the animated figures.[40]

This situation, lead all schools of architecture in Jordan to concentrate their first year curriculum on developing the basic concepts of composition and on the manual skills of the students to compensate for the shallow art education and art inferiority in the society. CAAD education starts in the second year.

This situation also requires the preparation of basic design course with projects that help overcoming these setbacks, and prepare the students for their upcoming design studies. "The Battle of Grids" is one project designed with this in mind. It will be explained in the following sections.

[40] The reference here is made to some extreme views in Islam that forbids the figurative and performing arts. A comprehensive work on the subject was carried by 'Amara (1991), in which he clearly demonstrated the falsity of this argument. However, the creation of the book itself in order to falsify the argument indicates that many did believe and still believe in these views throughout history and in our current time.

Basic Design at GJU

In Jordan the foundation course in the schools of architecture, and design in general, spans over two semesters. The courses are named differently according to the school and its approach. At the German Jordanian University (GJU) they are “Basic Design” and “Introduction to Architectural Design”; reflecting an emphasis on the architectural aspect of design.

In addition to the problems illustrated above and out of experience and meetings with colleagues an additional problem of coordinating different subjects taught with the basic design course was also emphasized. A student should be able to represent physical objects, abstract concepts, and emotions in his designs. These abilities should be acquired through free-hand-, technical drawing-, and basic design- courses.

Thus, the problems can be categorized as: the pre-education of students, the requirements of their upcoming education, and the coordination between basic design and concurrent subjects taught.

The structure of the two semesters was designed with these problems in mind. The first course concentrates on abstract conceptual design, the basics of composition, and the student ability to represent himself visually (two- and three-dimensionally), while the second concentrates on understanding the human aspect and proportion, the ability to represent the designs in the proper language of orthogonal projections and 3D drawings, and finally to actually utilizing the abstract concepts in the first course in a simple architectural design. Table 1 illustrates this structure with more details.

The project subject of this paper spans over the first half of the first course and is designed as a response to the problems identified.

The Battle of Grids

Out of their years of experience in teaching basic design, the current authors designed and developed a project that they believe it reorients the first year students towards the nature of design studies, empowers them with the required basic skills, and expose them to different aspects of design.

The current project, as a part of the structured curriculum, was implemented for two years on the students of the German Jordanian University. The students of the second implementation were greater in number, and were admitted to school of Architecture and Design after a personal interview which basic goal was to guarantee their interest and willingness for this kind of studies.

First	Introductory exercises [“Why this study”, Point, line, plane]	• Introduction • Exploring with materials & Media • Representing Concept
	Battle of Grids	• property of shapes , grid , concept

		• coloring • 2D ⇨3D • Drawing capabilities • Model making • Representing concept in design
	Experience & Polyhedron	• Understanding 3D polyhedron • Modeling • Representing emotions in design
Second semester	Human & his surroundings (dimensions & proportions)	• Representing real items in freehand • Understanding properties & human measurements
	Representing Architecture	• Representing architecture technically
	Designing Architecture	• Conceptual thinking • Design development • Presentation (Technical - Freehand - Modeling)

Table 1: Projects of the foundation year at GJU

Methods

First the objectives of the project were defined as a result of situation defined. Second the physical outcome was visualized and divided into stages and the brief was formulated. Finally a table of the intended acquired skills for each stage was created to help the educators achieve the objectives.

The studio time involved many open discussions with students and many lectures on the different aspects of design in addition to one to one tutoring for each student. The educators conducted periodical discussions to evaluate the outcome of each stage and the preparation for the next in addition to the individual case of each student and his evolution.

Project objectives

This “The Battle of Grids” project aims at introducing the students to the following notions:

-The characteristics of shapes and their grids through research and class discussion

-Design is the result of an encounter of different aspects of the subject under consideration

-Design and design-development should be according to a concept (in this case -abstract concepts).

-Design is a process

-Color can be used as a design tool to assert the concept and not for being “beautiful”

It also aimed at enhancing the following:

-The students' understanding of the relation between two- and three-dimensional designs

-Their technical-drawing capabilities

-Their model-making capabilities

Project brief

The project was designed with the following brief. A sample outcome for each stage is presented in figure 1 to illustrate the required work.

Stage I: I-1 Draw the basic two-dimensional shapes (the square, the circle and the triangle); then design their distribution within a landscape rectangular paper of 28*72 cm dimensions (a standard size for all subsequent stages). The sides and the diameter are 20 cm long.

I-2 Study the characteristics and the grids of these shape; understand the "logic of the shape."

I-3 Come up with any phenomenon of importance to you and assign its past, present, and future to one of the shapes. The choice should be made according the characteristics of the shape as perceived to match the phenomenon era.

I-4 According to the grid of each shape create a black and white design that represents the phenomenon it one of periods

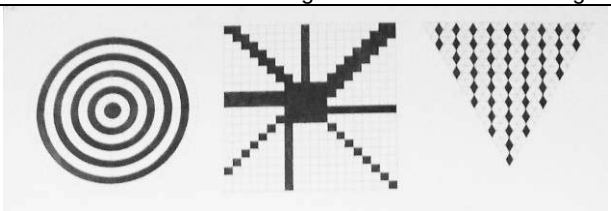
Stage II: Define the most dominant design, its grid must spread over the space; come into contact with the other two grids

Stage III: As in our real life a battle between the dominant grid and other two will arise and all will be affected, design these effects

Stage IV: Redesign the black and white designs to match with the new overall gird

Stage V: Assign a color for each era of the design and make transitions between the colors

Stage VI: Try to read this two dimensional design as a representation of a three-dimensional design and create the resulting from

	Stage I

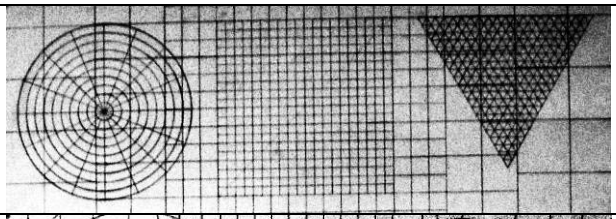
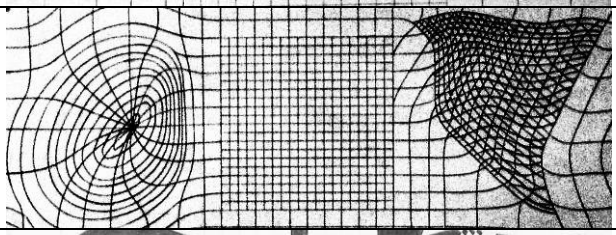
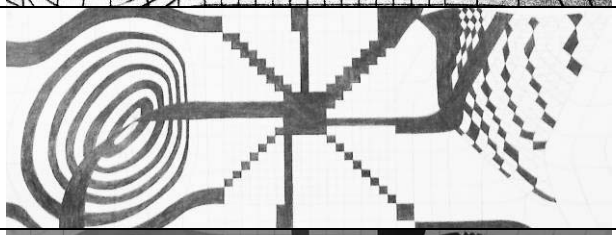
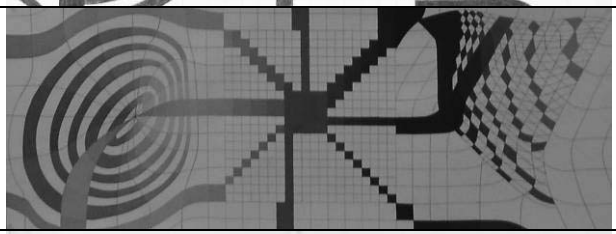
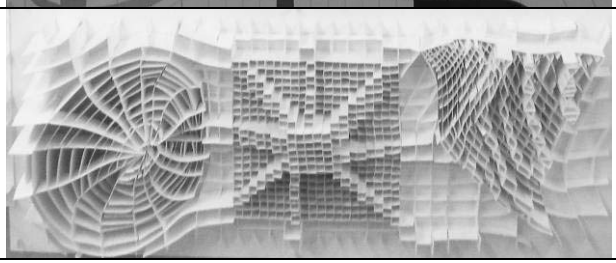
	Stage II
	Stage III
	Stage IV
	Stage V
	Stage VI

Figure 1: Stages of the project

Materials and media

The project was implemented on white card board with pencil and water color.

The final submission all stages were mounted to the wall in a vertical sequence. That was the first time the student would encounter his project as a whole. A new understanding of the project was envisioned (even to educators). All students' projects were mounted horizontally beside each other which enrich even more the overall understanding of the project.

Duration

The projects spanned over eight weeks covering half the length of the course.

Intended acquired skills

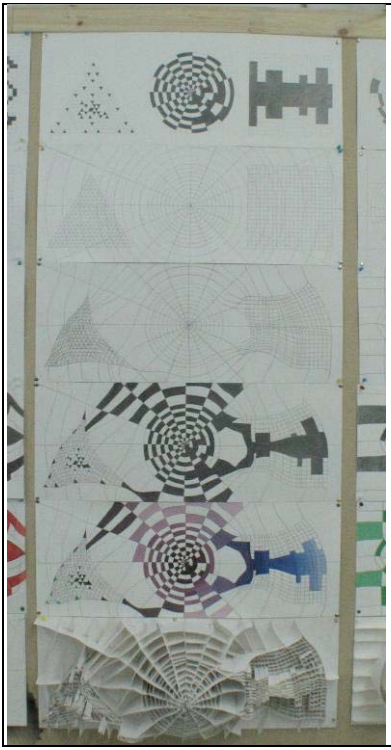
From each stage there were many intended skills for the student to acquire. They can be categorized into four groups; manual skills, conceptual thinking, critical thinking, and creativity and visualization. Table 2 illustrates the different intended skills for each stage of the project.

Stage	Manual Skills	Conceptual Thinking	Critical Thinking	Creativity & Visualization
I	• Drafting • Presentation • Accuracy	Start with a concept	Which shape first most?	2D design representing a conceptual idea
II	• Drafting • Presentation • Accuracy		Judging the most dominant shape	
III	• Drafting • Presentation • Accuracy	Add the battle concept to the original design	Judge the best composition of endless possibilities	Design lines according to a creative-sequential logic
IV	• Drafting • Presentation • Accuracy		Redefine design according to changes	
V	• Coloring • Color transition	Expand the concept to the choice of color	Judge the choice of color	
VI	• Model Making	Expand the concept to the 3rd dimension		Visualize the 2D in 3D forms

Table 2: Intended acquired skills

Student outcomes

The project along with the efforts of all educators and students produced highly acceptable results that were commended by all external examiners. The subjects they chosen to represent were very interesting and varied widely such as; women's rights, pollution, status of religion, racism… to name just few. Figure 2 shows samples of the students' designs.



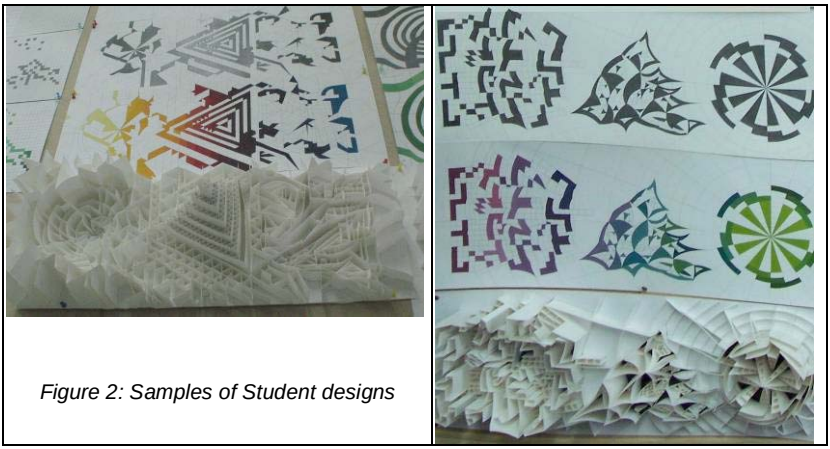


Figure 2: Samples of Student designs

The students showed developed skills in later projects. Some of them even made direct similar approaches in later design courses and achieved quality results.

Project Evaluation

To evaluate the project and its role in student's total education a survey was conducted. It included students who participated in the project and the educators.

The purpose of this survey was to inform project designers of the degree of achievement in regards to the goals stated and to enhance the design of similar projects in the future.

For the students the questionnaire consisted of 18 questions with a scale from 1(totally agree) to 5 (totally disagree). The number of students was 68. Table 3 lists the questions and the average answer.

Question	Av.
1. This project taught me how to represent a concept in a visual form	1.6
2. This project taught me that design development must be carried in according to the main concept in all stages of design.	1.5
3. Now I appreciate more the designs that are based on concepts and not just "beautiful"	1.6
4. I have some basis now in the way I look at designs and criticize them.	1.9
5. This project enhanced my 2D drawing capabilities and use of tools.	1.6

6. This project enhanced my coloring skills	2
7. It was my first serious coloring assignment	2.1
8. The project enhanced my model-making capabilities	1.7
9. It was my first serious model-making.	1.6
10. After the project, I am able to analyze a two-dimensional shape, understand it properties and grid.	1.8
11. This enabled me to understand and critically think of designs and paintings I see, and I saw earlier and understood it differently.	1.8
12. Any design task has many aspects and facets and a designer needs to handle them and solve their problems in a parallel manner.	1.7
13. The use of design elements (color, shape …etc.) in all design stages should follow the starting concepts and its evolution	1.7
14. After the project, I look into any 2D design and see some 3Dl visions.	2
15. I base these visions on the properties I learned from the project.	2.3
16. I used to do that long before I participated in the project.	3.3
17. This project was in the right timing regarding the skills I learned in other subjects like drawing courses	2.1
18. I did use the skills I acquired in this project in my later designs	2.6
The average is taken for answers from 1 totally agree to 5 totally disagree	

Table 3: Students' questionnaire and average answer

For the educators the questionnaire consisted of 10 questions with a scale from 1(strongly agree) to 5 (totally disagree). The number of participants was four. Table 4 lists the question the questions and the average answer value.

Question	Av.
1. This project teaches the student how to represent a concept in a visual form.	1.3
2. This project teaches the student that design development must be carried in according to the main concept in all stages of design.	1
3. The project teaches the student to appreciate more the designs that are based on concepts and not just "beautiful"	1.8
4. This project equips the student with some basis in the way he looks at designs and criticizes them.	1.8
5. This project enhances the two-dimensional drawing capabilities and use of tools.	1
6. This project enhances the student's coloring skills	2
7. The project enhances the student's model-making capabilities	1.5
8. The project enables the student to analyze a two-dimensional	1

shape, understand its properties and grid.	
9. This project helps students to visualize two-dimensional designs as three-dimensional forms.	1.3
10. This project was in the right timing regarding the skills learned from other subjects	1.5
The average is taken for answers from 1 totally agree to 5 totally disagree	

Table 4: Educators' questionnaire and average answer

Conclusions

From the students' questionnaire the following conclusions can be drawn.

Regarding the conceptual design, the students think that they can put a concept in visual form (Q1: 1.6), and that they should develop their designs in all stages according to a basic concept (Q2: 1.5) with aspects of color and form following that concept (Q13: 1.7).

On the analytical side the students see that now they appreciate designs according to their concepts (Q3: 1.6), and that they have basis for criticizing designs (Q4: 1.9 and Q11:1.8). They perceive design as a multifaceted task to be handled in a parallel manner (Q12:1.7). They are also confident in their ability to analyze two-dimensional shapes and deduct their properties (Q10:1.8).

For the manual skills the students state that they benefited from the project (Q5: 1.6 for drafting, Q8: 1.7 for model making, Q6: 2 for coloring). Most of them are new for such skills (Q9: 1.6 for first serious model making, and Q7: 2.1 for first serious coloring)

For the 3D visualization issue the students believe that this project helped them doing just that (Q14: 2 for the ability to so, Q15: 2 for acquiring the ability from this project, and Q16: 3.3 for having this ability before).

Finally, the students think the timing and the coordination with other subjects is good (Q17: 2), but they did not think strongly that they used their capabilities in later projects (Q18: 2.6).

From the educators' questionnaire similar conclusions are also deducted.

Regarding the conceptual design, the educators see the project helps teaching the student to represent a concept in visual form (Q1:1.3) and develop the design in all stages according to the starting concept (Q2:1). The educators are more enthusiastic towards this aspect.

On the analytical side the educators think that the project helps students to appreciate designs according to their concepts (Q3:1.8) enable them to criticize according to solid basis (Q4:1.8). The project's effect on the students' ability to analyze 2D shapes and find their properties is highly affirmed (Q8:1).

On the 3rd dimension visualization aspect the educators highly ranked the project (Q9:1.3).
On the synchronization issue the project was also highly ranked (Q10:1.5).
In general the two questionnaires resulted in close outcomes. The project is perceived as a good start for the first year students. Some modifications and enhancements can be added to all aspects in general and to the coloring skills and to linking the project with later design tasks.

References

Boucharenc C. G. (2006) *Research on Basic Design Education: An International Survey*, International Journal of Technology and Design Education 16:1-30.

Ranjan, M. P. (2005) *Lessons from Bauhause, UIM and NID: Role of Basic Design in PG Education*, a paper submitted for the DETM Conference at the National Institute of Design, Ahamadabad.
http://homepage.mac.com/ranjanmp/.Public/Bauhaus_Ulm_NID_2005.pdf

Stewart, Mary (2006). *Launching the Imagination*, Mc Graw Hill 2nd ed.

Itten, Johannes (1975 revised from the original of 1975). *Design and Form*, John Wiley & Sons, Inc.

'Amara, Mohammad (1991). Al-Ilsam wa al-funun al Jamila (in Arabic) [Islam and Fine Arts], Cairo, Dar al-Shuruq.

DESIGN FOR CULTURAL DIVERSITY

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ABSTRACT

Abstract
Basic design is expected to prepare students for their upcoming design studies. In Jordan it is also expected to substitute for the lack of a proper art and design education in schools in general. Out of their years of experience in teaching basic design, the current authors designed and developed a project that they believe it reorients the first year students towards the nature of design studies, empowers them with the required basic skills, and expose them to different aspects of design. “The Battle of Grids” spans over eight weeks with six stages introducing the students to the basic design elements and notions.
The project produced highly acceptable results that were commended by all external examiners. The students showed developed skills in later projects. Some even made direct similar approaches in their later designs and achieved quality results.
The project, as a part of a structured curriculum, was implemented for two years on the students of the German Jordanian University. It was evaluated through surveys among educators and students who participated in the implementation process. Both parties commended the project; and the survey indicated some aspects to be enhanced in later implementations of the project.

Keywords
Basic Design, Grid, Architectural Education

DESIGN FOR CULTURAL DIVERSITY

Modernization project and the globalization processes affected most parts of the world that led to emergence of cultural, social and spatial similarities. As the result of this process some cultures and local identities have even come to the point of being vanished. The last quarter of the 20th century, however, has been a waking–up period for many. Parallel to the development of postmodernist approaches, preservation of local cultures and characteristics have been put on the agenda and in most parts of the world studies and efforts have begun to dwell upon research and preservation of local cultures. There appear to be voluminous research on how such local cultures shall be preserved within development context of contemporary cities. Planning and design problems emerge as one of the main sets of intervention that is to take specific characteristics of local life into due consideration. This remains a difficult task however. Between the local and the global parameters that shape the local circumstances, particularly the settings that have to deal with ethnic communities appear to be further problematic as the conflicts of urban life seem to lead even to gentrification of certain parts of cities. Cities intend to target at a special level of "spatial quality" at the expense of deprived groups, which possibly involve the gentrification of local communities. Departing from such a point, the way how planning and design issues are undertaken at such parts of cities appears to be especially important particularly if the main intention is to avoid occurance of any processes of gentrification. From this standpoint, this paper aims to discuss how a local culture/diversity could be preserved and can be kept vital through design processes on a specific case.

The second year urban planning studio of Dokuz Eylul University, Faculty of Architecture, Department of City and Regional Planning focuses on the design of a residential area, where the students are obliged to design a neighborhood. During the first semester of the year 2007, the mentioned studio coordinators have prepared a different program in order to avail the students for going beyond learning special parameters of and gain skills in designing a neighborhood. Students were to learn and engage with a different culture and they were to develop design skills for the needs of a specific cultural group. For this reason a gypsy neighborhood in the İzmir metropolitan city has been selected. The first part of the studio work consisted of a detailed site survey. Through this analysis, students were to understand the cultural and spatial characteristics as well as spatial and social needs of this special group. The second part of the studio consisted of the design of a livable housing environment for this group of people. The design process implied successes as well as failures. Following the discussion based on analytical studies accomplished, the aim of the

discussions involve further consideration of the successes as well as the failures of studio work as based on sample projects of students.

With this studio work, students were to understand a different culture and they were to design a livable housing environment. However, there have been specific difficulties met that shaded the success of designs based on diversity. It may be concluded that this is mainly due to our modernist design and planning training on the one hand and legislative framework and regulations on the other. The paper will further try to scrutinize a range of different reasons that result in failures of design with the intention to develop a better strategy in methodology of training in general.

Key words: diversity, local culture, design, izmir, gypsy community

INTRODUCTION

The modernity project as defined by Habermas (1983) that had started by the Enlightenment project diffused to our lives in a short period of time and this project created very strong effects in all aspects of our lives.

The cities we live in most parts of the world, the rules and regulations for planning and architecture are all the results of modernization project that had aimed to create the democratic and the rational city. Architects and planners such as CIAM, Wright, Le Corbusier or Mies Van der Rohe had developed their design within the modernization context. However, critiques to this project soon emerged, firstly by Jane Jacobs (1961) in her book “The Life and Death of Great American Cities”, where she defined the social housing projects as the focal point of social crime and vandalism and criticized the public spaces created by the Modernity thought. Berman (1982) pointed to other aspects of modernization project such as its effects on local identities and cultures.

> *The modern environments and experiments divide all the geographic, ethnic, class and national boundaries vertically. In this means, it can be asserted that modernity unites all humanity however, this is a unity of paradox where each of us swifts to an unharmonious unity and conflict*. (Berman, 1982)

Today, we experience that the modernization project led to the emergence of cultural, social, and spatial similarities, or in other words, ‘identicalization’. As result of this process some cultures and local identities have even come to the point of being vanished. The last quarter of the 20th century, however,

has been a waking–up period for many. Parallel to the development of postmodernist approaches, preservation of local cultures and characteristics have been put on the agenda and in most parts of the world studies and efforts have begun to dwell upon research and preservation of local cultures. There appear to be voluminous research on how such local cultures shall be preserved within the development context of contemporary cities.

This paper focuses on the design for a local culture/diversity. The adopted aim has been to discuss how such diversified local cultures could be kept vital through design processes. This paper discusses the issue on the sample of a design studio work that has been conducted for the second year urban planning students at the Faculty of Architecture in Dokuz Eylul University, Izmir, Turkey. The second-year urban planning students in the Faculty are expected to design a residential district where they can obtain the knowledge concerning special parameters of and gain skills in designing a neighborhood. However, during the fall semester of the year 2007, this program has been taken one step further. The coordinators of the project studio have directed the students to discuss design principals for a culturally diverse group under threat of displacement. For this due course, a gypsy neighborhood has been selected since it constitutes a very good example for 'design for diversity' issues with strong representation of spatial and social characteristics. The selected neighborhood is also located at proximity to the central city where the land prices are quiet high. That area is also subject to regeneration, displacement and gentrification processes.

Students were to asked to identify and discuss the issues below;

- Social and spatial characteristics of the neighborhood differing it from the rest of the city
- Main reasons underlying the difference.
- Current spatial, economic and social problems
- Threats for the neighborhood
- Spatial parameters contributing to community development
- Spatial and social reasons for exclusion of the neighborhood.
- Design principals for designing a residential area for this specific local culture.

Following analyses and syntheses concerned with the above-mentioned issues and questions, students were obliged to design a residential area for this special group. Nevertheless, there have been specific difficulties met that shaded the success of designs based on diversity. It may be revealed that this is mainly due to the Modernist design and planning training on the

one hand and legislative framework and regulations on the other. The paper will further try to scrutinize a range of different reasons that result in failures of design with the intention to develop a better strategy in methodology of training in general. Prior to that, a brief explanation concerning the differences in the development process of urban pattern in Turkish cities will be given in order to outline the basis for the main discussion to be made in the paper.

A Modernity Project – The Urban Pattern of Turkish Cities

The establishment of the Turkish republic constitutes a breaking point in terms of the modernization of Turkish cities. Till the end of Second World War, this period has been addressed as the institutionalization period of both planning and architecture in Turkey. (Batur, 1998; Tekeli, 1998) The republican government had put great emphasizes on spatial strategies for success of the government. (Batur, 1998; Tekeli, 2001)

During this period many Turkish cities gained a European appearance with wide boulevards and squares. Relatively, the architecture styles have changed. However, this modern context had a destructive approach towards the historical sites. The traditional sites were being criticized for their irrationality. Rules and regulations of urban planning and architecture were mostly established during this period. By the end of 1950s, all the large Turkish cities had similar planned parts. Wide streets for transportation, and circles at the intersection points of these streets, parks, wide areas for the institutions and identical plots were all planned homogenously in all cities despite their distinctive characteristics.

However, there were some developments that were to be regarded as against the modernity project. These were the informal housing areas built at the peripheries of the cities which are called squatters. Squatter areas started to emerge by the second half of the 20th century in large Turkish cities and since that time they spread to the peripheral areas of the cities and by the last decades of the 20th century, they appear to have invaded almost half of the built up areas of metropolitan cities. The squatter areas are different from other planned parts of cities, because they are mostly self-help and self-planned areas. For this reason, it has usually been the organic pattern of housing areas and architecture developed according to the needs and supplies of users that formed the main spatial characteristics of squatter areas.

By the 21th century some of these squatter areas, mostly the ones that are located at critical locations, such as the vicinity of the highway crossroads have become subject to regeneration. With these projects the squatters are

being demolished for the construction of new apartment buildings with a modern look that serve the tastes of consumers.

Briefly, it can be stated that the development of Turkish cities dwelled on the ideals of a modernity project. However, some unexpected results such as the emergence of squatters and other problems such as over densification and insufficient infrastructure have also emerged.

Diversified Cultures in the Metropolitan City of Izmir – Ege Neighborhood

Izmir, the third metropolitan city of Turkey, has experienced the above-mentioned irregular urbanization processes. The squatters at the peripheries of the cities displayed such an appearance that conflicted with the modernity project of the city and at these areas migrating groups gathered according to their identities and sustained their local cultures. One of these areas belong to that of the gypsy culture. Gypsies are one of the ethnic groups that live at some parts of the squatters and the inner areas of the central city.

Ege neighborhood, which is located at the inner area of metropolitan city Izmir, has been selected as the subject of the second year project studio. The reasons for such a selection are as follows:

- this neighborhood reflects the local culture characteristics both spatially and socially;
- the size and population of the neighbourhood displays an easy-to-handle scale, which were to fit the studio subject of the second year.
- this neighborhood can be easily identified from other parts of the city, because it has borders;
- it is subject to regeneration projects because it is located at the inner part of the city where land prices are quite high and;
- people living in this neighborhood suffer from problems of social exclusion.

Therefore, students were to discuss issues such as exclusion, regeneration, displacement, diversity and gentrification as well as the design principals for a local culture.

The Spatial Characteristics of the Neighborhood that Contribute to the Development of Community Spirit

As mentioned before, Ege neighborhood is located at the inner area of Izmir. This neighborhood has been a gypsy neighborhood since the second half of

the 20th century. Residents have first settled at the historical housing stock of the area. Later, with the growth in the number of population they have built slums to environs, and in due course the municipality has built some blocks by 1970s to move the people at the slums to healthier conditions. However, construction of slums has continued in the following periods. Today, three different types of housing developments can be examined in the neighbourhood: firstly, the existing historical urban pattern; secondly, the multi-storied housing blocks; and third, the low-rise slum areas neighbouring the blocks.

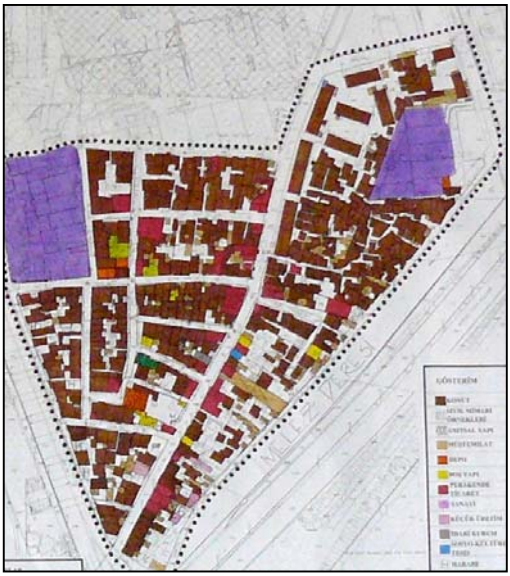


Figure *1:* *The land use pattern at Ege neighborhood, 2007.*

Figure 2:*The grid housing stock that implies historical buildings, 2007.*

Figure 3: The blocks that were built previously to upgrade
the residential areas of the neighborhood.

Figure 4: *The slum areas in the neighborhood*

During the visits at the site, the site surveys and analyses have shown that this neighborhood built in three different traditions in fact displayed a singular character. The character of the gypsy culture was experienced in every part of the neighborhood. It may therefore be claimed that community spirit is in fact formed by the social ties of the community itself, more than the spatial characteristics of the community. However, it may additionally be indicated that some characteristics such as the borders of the neighborhood contributed to the development and preservation of the community spirit.

Below is given the list and explanations of some of the spatial characteristics of the area that helped to develop and preserve the community spirit:

1.Borders

The neighborhood has definite physical borders. The neighborhood, which has a triangle shape, is bordered by railway on one side, and by a river on the other. The third side of the neighborhood neighbours non-residential uses. These borders that excluded the neighborhood from the environment also contribute to the development of community spirit within borders.

Figure 5: *The railway that borders the neighborhood on one side*

2.Gates

The neighborhood has only two accesses. That is, accessibility to the neighborhood could be limited by its residents, which also contribute to the development of

community spirit. For instance, permission had to be asked from the residents to carry the researches for the project in the neighborhood.

Figure 6: *The entrance of the Ege neighborhood that has beenformed by the railroad crossing*

3. Close-ended Streets

Within the urban fabric of the neighborhood, close ended streets are located where the inhabitants gather during the day and night. Besides, some wide close ended streets are being used for rather special occasions such as weddings. Residents of Ege neighborhood organize some of these close ended streets at the weekends for the weddings of their residents and the street gains a party appearance with these organizations.

4.Shopping Along the Main Street

Even at a rainy day, residents easily prefer to get out of their houses as soon as the rain stops. The main route of the residential area where the shops are located is always the main activity area of the neighborhood. Density of the pedestrians along the main traffic route of the neighborhood also helps to slow down the vehicular access.

Figure 7: *The main route of the neighborhood where shops are located*

5.Housing and Street Life

Most of the buildings at the neighborhood are one or two-storied except the formerly built blocks. These low rise buildings also directly open to the streets. Therefore, their locations, entrances and building heights allow people get involved and create an active life along the streets. The communication opportunities also help develop the community spirit.

Even the blocks in this neighborhood strongly contribute to the community life because people prefer to sit at the balconies of the blocks and chat with each other from their balconies.

Street life at the neighborhood creates pedestrian environment independent from any rules or regulations.

6.Building Density

The neighborhood had a high population density. Although the buildings are low rise, they are closely located and constitute a dense structure. Especially at those parts where urban pattern gives an organic form, houses seem to be entangled to each other. In due course, this part of the fabric carries many problems such as lack of ventilation and lightning. The houses are also humid. However, low rise –high dense structure surely contributes to the community spirit of the neighborhood.

Figure 8: *The colorful buildings and narrow paths in the organic pattern of Ege neighborhood.*

7.Identity

The neighborhood implies identity different from rest of the city. Identity of the neighborhood has been defined by the social characteristics of the residents, but their reflections to space also contribute to the development of identity at the neighborhood. For instance, the happy spirit of the gypsy community is reflected to the colors of the houses.

Figure 9: *The colorful buildings at the grid urban pattern*

Attempts to Design for Cultural Diversity

During the second year urban planning studio, some of the students were asked to extract the elements that have build the community spirit of Gypsies and redevelop these elements while regenerating the same sense of community.

However, the design attempts have resulted in successes as well as failures due to some restrictions.

Density

Although Ege neighborhood is a low rise neighborhood, it is a high-dense settlement, because residents live in small-size attached houses that are located in a complex organic form side by side.

In the design studio, students were to design houses that were at average sizes, sufficient for the number of people living in the unit. That is, the students designed the housing units in universal standards, which ended up with large residential areas that increased the building density.

High building density created the need for larger open areas among the buildings to supply the living standards for ventilation, orientation and lighting. For this reason, most of the students preferred high rise apartment blocks in order to supply the necessary health standards for ventilation and orientation that could be solved in order to keep the same number of people at the same place. However, high rise building environment hardly creates similar street space. Although the initial intention was to create common areas for public use, the wide open areas between high rise buildings fail to contribute to the community spirit when compared to those formed by compact location of buildings.

The Width of the Roads

Rules and regulations of urban planning in Turkey indicate that the least width of a vehicular road cannot be less than 10 meters in width. The least width of a pedestrian road could be 7 meters wide. For this reason, our students were to design roads according to the regulations; however the organic pattern of the Ege neighborhood has been formed mainly by pedestrian axes with widths of even 2 meters.

Attempts to supply the necessary standards for roads appear to have restricted the design skills of the neighborhood as well.

These two main restrictions building/population density and the road widths have been the main reasons for the failure of developing community environment similar to the existing urban fabric at the certain case.

The students had successes in the attempts to create the similar physical urban features.

Gathering Places
Students tried to design gathering places for the gypsy community as exists in Ege neighborhood.
Places for Special Occasions
Students also tried to create places for special arrangements of the gypsy community such as the wedding ceremonies.
Organic Urban Pattern
Some students tried to create the similar organic urban pattern with the Ege neighborhood.
Heterogenity
Some students tried to create heterogeneity with the sizes and different types of housing units similar to the heterogeneous appearance of the Ege neighborhood.
Terraces as open gathering places
The gypsy community is used to chatting at the streets and terraces. Therefore, some students chose various housing units in their neighborhood design that allows gathering or chatting at open terraces and the fronts of buildings.



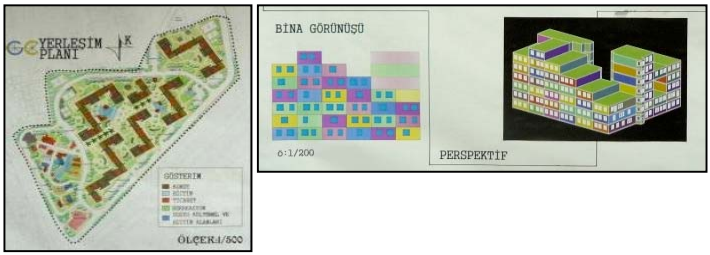
Project #1 Aslı Curavcı Project #2 by Ersin Demir Project #3 by Arif Balaban
Figure 10 : *Successful projects of the studio work*

Project # 1 has been regarded as considerably successful compared to other projects, since it appears to have created gathering areas including community centers for specific needs of the gypsy community.

Project # 2 was also successful in maintaining the semi-private places, creating a heterogeneous housing environment consisting of different sizes of buildings. In addition, the attached and semi-attached buildings have

given the opportunity to identify the street character, which the living community was in need of.

Project # 3 was regarded as successful for maintaining the lively environment with its terrace-housing units. The difference of the project's spatial layout seems to have reflected the difference of the gypsy community. While the enclosed spaces provided public as well as semi-public uses, the graded character of the units seems to avail for social gathering in different elevations.



Project # 4 by Harun Balcı
Figure 11

In the final project reviews, project no. 4 has been considered also as one of the successful projects for its attempts to use colorful and heterogeneous housing blocks that also enabled use of the terraces. The intention in selection of the blocks has been to prevent multi-storied housing from bringing any monotonous layout. This concern has also been reflected in the public open spaces allocated to a wide range of activities that the gypsy community was thought to be in need of.

Concluding Remarks

During the second year urban planning studio, the attempt has been to design for cultural diversity. Even though the scale of the project displayed an easy-to-handle content, the background issues of the area has turned the project into a difficult-to-grasp formulation. The reason underlying the selection of such a special neighborhood in Izmir was that it outstands with its distinctive characteristics, community spirit and the identity of the local culture very strongly. Students were asked to analyze and make their designs for the same culture in order to understand and gain skills for designing for a diversified local culture. However, the results implied successes as well as failures. In their design tasks, even though the students have tried to extract some elements such as gathering places, building heterogeneity and the organic urban pattern, failures mostly

depended on national urban planning rules and regulations that were developed as part of the modernity project.

It may be suggested as a conclusive remark that although modernity project and the globalization processes affected most parts of the world, there is still the chance to experience the spatial and social elements of local cultures and identities. The gypsy culture and its spatial organization constitutes one of those local identities that should be kept vital.

The education strategy of planning and urban design education shall therefore involve such considerations that are based on understanding a different culture and spending effort to design according to specific needs of specific communities. Only through adoption of such a strategy can the modernist basis of design and planning approaches may be questioned further. The practice of designing may then be followed by criticizing the legislative framework and regulations that seem to homogenize urban life.

For reasons as such, it is important to let students in urban planning and design education to become aware of the difficulties of planning for specific communities with an approach that shall be purified of subjective considerations. For this reason, despite the failures that may emerge, the selection of such topics and 'places' within the complexity of cities may provide for knowledge and skills to be utilized in dealing with complex urban problems of any kind.

References:

Batur, A., 1998, 1925-1950 Döneminde Türkiye Mimarlığı, *75 Yılda Değişen Kent ve Mimarlık*, ed. Y. Sey, Tarih Vakfı Yayınları, 1998, s. 209-234.

Berman, M. (1982) *All that is Solid Melts into Air*, New York

Habermas, J. (1983) *The Philosophical Discourse of Modernity*, Oxford

Jacobs, J.(1961) *The Death and Life of Great American Cities*, New York

Tekeli, İ. 1998, "Türkiye'de Cumhuriyet Döneminde Kentsel Gelişme ve Kent Planlaması", *75 Yılda Değişen Kent ve Mimarlık*, ed. Y. Sey, Tarih Vakfı Yayınları, s. 1-24.

Tekeli, İ. 2001, *Modernite Aşılırken Kent Planlaması*, İmge, Ankara, 2001.

DESIGNTAINMENT

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ABSTRACT

"Best ideas usually come from the people who are having fun. The down-faced ones and those with furrowed brows would only rarely come up with good ideas. Were they having fun because they could have good ideas or were they having good ideas because they had fun? There is no doubt that the correct answer is the second." Jack Foster

How come that some people can be extremely creative? Why do some creative and brilliant ideas pop up only in some minds, but not others? The related questions often remain limited as to being confined only to the genes some people are born with. However, creativity and way of thinking in a different way are such characteristics that shall be considered as inherent in all. The only thing is to evoke the child inside. The fact that all children are creative constitutes the main reason underlying this claim. All children are born with the ability to be creative. However, they tend to lose such capacity through different structural frameworks of the family and education. Therefore, it remains considerably crucial to evoke creativity or, in other words, arouse childhood creativity that has in a sense been sacrificed because of social norms and living patterns learned by age.

The education of basic design has to be treated in a similar understanding. When we consider education and certainly basic design education as a way to generate the intended changes in life of the individual, we come up with two important components in the end. One of these components is the self-essence and the other is the will power, which stands for the will to act in accordance with the mentioned self-essence. According to Baudelaire, *"Genius is childhood recaptured."* As manifest in his words, the creative process can only be possible through an intended inward return to self.

In the course of education carried out in such an understanding, it is not possible to take the talent and potential of individuals under shelter of any new narrowing process via comparisons and groupings. The rather more childish grounds that are to evoke creativity shall bear such characteristics that entail emancipation. Adults think too much and have too many boundaries, knowledge, rules, preconceptions, assumptions and restrictions.

The children, on the other hand, are innocent and free, such that they do not know what they cannot or should not do. They see the world as in reality, just not as taught to elderly. When emancipation and the act of being childish are considered in relation to one another, the act of getting **"entertained"** suddenly becomes an inevitable sphere of experience. In words of Oscar Wilde, *"Seriousness is the only refuge of the shallow".* For this reason, design education shall be open to such activities that are based on training via entertainment, which we hereby refer to as **"designtainment"**, as an intersection of design with entertainment.

As for the second important way to bring emancipation, it follows the road of courage. Sometimes people are in need of a stimulator that helps them find the courage to touch their self-essence, which means that they are in need of **"motivation".** On the condition that basic design education embodies such power within its main structure, in other words, in case it becomes an important instrument to help students discover their own potentials, then it means that its main purpose will have been achieved.

This paper intends to share the related experience of Basic Design course given in Dokuz Eylul University, Faculty of Architecture, Department of City and Regional Planning in Izmir, Turkey. The mentioned course has adopted a methodology based on the above-mentioned approach. It is considered that theoretical discussions of a congress titled "Designing Design Education" shall further be enriched with considerations of different experiences such as those that turn design activity into a childish entertainment activity in the will to reach greater motivation for creative results to be attained.

Keywords: *creativity, motivation, 'designtainment', courage, education*

DESIGNTAINMENT *(designing with entertainment for motivation)*

The theme of "designing the education of Basic Design" brings forth the two interlinked spheres of "design". While the first one of these spheres dwells upon our ways of approaching the field of design or basic design, the second one stands rather as a problem of pedagogy pointing to the ways of re-considering the processes of training.

When taken from such a framework, there appears to be varying attitudes and approaches adopted by different lecturers of universities and even among those in different tiers of academic units under shelter of the same university. Diversity as such is meaningful in the sense that design itself already exists within comprehensive and debated grounds constituted in time by architects, artists or philosophers. Nevertheless, it does not seem possible to expound upon such differences of our time merely from a perspective that deals with such a deep and philosophical context inherent within the sphere of design itself. In line with this, this paper intends to approach the subject matter in terms of modernity, which determines the different trends at issue and shapes the ways of breeding information or of formulating the processes of education, and also considers the specific conditions modernity appears to go through at present. The underlying reason is that, modernity emerges as an inevitable departure point of reference under those circumstances where both spheres, namely the design approaches and pedagogical considerations, are discussed in close relation with one another.

As is known, the idea of modernity has been shaped by 18th century philosophers of Enlightenment whose works were targeted at objective science, universal ethics, universal laws and autonomous ways of fostering art. Founded with the intention to enrich daily life from such a perspective, on the one hand, and to initiate advanced studies in art and science for human happiness, on the other, the Bauhaus school has been the starting point of basic design education. Yet, we currently are undergoing a process during which modernity and the Bauhaus ecolé that has reflected principles of Modernity on ways of education, both appear to be subject to severe critiques today. We can as well monitor the circumstances where those critiques that have been pointed to the belief of modern science, epistemology and methodology in ratio and rationality have gradually been directed to the context of Gestalt theory of perception, upon which the Bauhaus school has founded its empirical realities. [41] However, whether

[41] Even though consideration of Gestalt's visual perception system of man in terms merely of formal aesthetics finds itself a place within the state of postmodernism on

developed upon weaknesses of the Gestalt theory of perception or upon the credibility crisis Modernity goes through these days, there is no doubt that we currently are within a newly-developed process. Besides, this new stage of development is in need of new designs…

On the route of new designs, it remains crucial to have a thorough evaluation of existing knowledge and experiences as well as of the circumstances of this on-going crisis. What kind of a crisis then is this? Obviously, the modern ratio emphasized universality, unity and holisticality and the idea that the same rules are supposed to be valid everywhere. *But it has failed to work with universal ratio.* On the other hand, we are aware that modern science displays a dominating structure that imposes power via ratio. A structure as such would not permit emotions, internal questioning and sensation, self-rule, imagination and fantasies *and it really has not done so..*

In addition, departing from such fundamental circumstances, the many numbers of challenges that emerged in a variety of different fields have entailed the state of what today is named as postmodernism. Contrarily however, the naming as the postmodern represents the crisis itself. While this approach depicts the behaviour concerning the search for the only and absolute truth under conditions where the universalization argument vanishes and diversity is begun to be defended, as something that can be spoiled due to existence of alternatives open to interpretation, it in fact draws attention to the conditions of crisis. However, presented within a framework as if it gives importance to socio-cultural differences and emphasizes flexibility, the state of post-modernity is also discussed under such a context that it is made to be believed as a new and magical formula to create the required sphere of further development of design.

This manifestly is the result of education being captured within a pragmatic sphere. Under circumstances as such, education remains with no chance to gain any different meaning under neither modern, nor postmodern contexts. Within a structure where education appears to have become an instrument of current sources, it does not seem possible to speak of any new consideration for design education or to re-design the education of design at all. Each model to be dwelled upon is bound to loose its soul due to the mere target of reinforcing the current conditions.

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basis of environmental symbolism, it still remains inevitable to question it further. (Lang,1998).

What sort of a design education then?

On the condition that we begin noting the existing boundaries, that is the instrumental role of the spheres of design and education, only then can we attain a new ground for sound restructuring. On such grounds, we can no longer have any opportunity to construct design education as a process of dealing with technical knowledge and domains to be directly integrated into professional life as mere architects or planners. Within a framework of education that in fact may involve a wide range of purposes, professionalism or support for the existing system may become only as one among the others.

The mentioned qualificational changes here refer to an educational method that is part of not only the fields of architecture or planning education. The main component of this educational method is creativity. The sphere of creativity consists of such special skills people are born with. Since it emerges as an extremely subjective area closely interlinked with personal life, the educational method that evolves upon this area seems to work upon reconstruction of life itself. Therefore, the work at issue occurs to have been loaded with great responsibility. This needs to be on one's own accord as sensitively as possible.

Nevertheless, when we consider education and certainly design education as a way to generate the intended changes in life of the individual, we come up with two important components in the end. One of these components is the self-essence and the other is the will power, which stands for the will to act in accordance with the mentioned self-essence. According to Baudelaire, *"Genius is childhood recaptured."* As manifest in his words, the creative process can only be possible through an intended inward return to self and re-discovery of the childhood.

At this point, we have to confront the biological foundations of childhood. However, these foundations have always gone through changes of meaning within various social organizations in various historical time periods. In general, within different meanings given on basis of the difference between childhood and adulthood, childhood has always attained an artificial position according to the adulthood characteristics conceived by societies. Modernity and the family as one of its significant institutions have seen childhood from such a perspective. The idea of having children be educated for long periods of time gained particular importance within the institution of modern family and the family provided the child with the highest level of emotions for kindness and responsibility in order to enter the world of adults. Besides,

according to the developments in communication, the family has also played an instrumental role in spreading the expectations, which have been generalized to the extent that cannot be based on individual characteristics concerned with being a child or an adult.[42]

Today, it is evident that we are face to face with such developments that exceed such role of the family. Beyond creating a model for advanced society, the final point arrived in fields of communication and technology has entailed the debate on difference between being an adult or a child in context of the global impacts created individually. These debates can be depicted also as counter-positioning of childhood and the world of possibilities. Likewise, there have been voluminous research dealing with this opposition in terms of the loss or disappearance of childhood.
However, there exist crucial drawbacks in having these considerations be based upon such opposition. Such a consideration leaves out the debates on those impacts which create intended transformations that in fact make use of the world of real possibilities by way of integrating the disappearance process of childhood directly with existence of the world of possibilities. Besides, as supported by research studies of Jean Piaget,[43] if we believe in the knowledge children are born with, then it evidently becomes impossible to speak of any disappearance of childhood. It is only pressure and limitations that we are to confront.

Thus, it remains crucial to be in need of social norms and models, which were in fact available all from the beginning, but were taught during growth instead, and of such approaches that re-activate the creativity, namely the childhood, which has been sacrificed. Furthermore, in the course of education carried out in such an understanding, it undoubtedly is not possible to take the talent and potential of individuals under shelter of any new narrowing process via comparisons and groupings.[44] The approach to

[42] Postman defines childhood as output of a mode of information controlled merely by adults and its environment produced in such circumstances. He defends that restructuring of childhood is dependent upon restructuring of this environment. (Postman, 1995)

[43] In his studies, Piaget has endeavoured to reveal that children were to possess a part of their knowledge from birth. According to him, children should be seen not as empty bags to be loaded with knowledge, but are active constructers of knowledge in this respect. (Piaget,1998)

[44] In Piaget's opinion, differentiating the child's knowledge as either "right" or "wrong" means misconception of the event as well as failing to show the required respect needed. Children can attain a full conception only of the things they have discovered.

be adopted in this respect will therefore be based upon a selection between the ways to let those volunteering persons be trained in such terms or to let their personalities that have been mishandled all their lives long get into a real creative process.

The selection mentioned here is directly related to the description of the sphere of emancipation and is confined to the ways of self-expression given to childhood by the world of adults. Therefore, the rather more childish grounds that are to evoke creativity shall bear such characteristics that entail emancipation. Adults think too much and have too many boundaries, knowledge, rules, preconceptions, assumptions and restrictions. The children, on the other hand, are innocent and free, such that they do not know what they cannot or should not do. They see the world as in reality, just not as taught to elderly. When emancipation and the act of being childish are considered in relation to one another, the act of getting "entertained" suddenly becomes an inevitable sphere of experience. In words of Oscar Wilde, *"Seriousness is the only refuge of the shallow".* For this reason, design education shall be open to such activities that are based on training via entertainment, which we hereby refer to as "designtainment", as an intersection of design with entertainment.

Why Entertainment?

The Thesaurus for the concept of "entertainment" gives the below definitions:

1. to spend time with pleasure
2. to amuse with someone's weakness or failure
3. to maintain or keep up
4. to admit into mind, consider

As manifest in these definitions, the idea of being entertained takes place as attitudes and activities that balance the seriousness and boredom in social life. Likewise, the famous thinker Heidegger mentions those who fall into the trap of material life and carry out a shallow style of living. He continues on by saying that the common characteristics of such people are that they have forgotten their existence. When approached from many religious beliefs, the act of being entertained occurs as a state that leads people astray, distant from their own purposes. If we are to look at the historical and philosophical courses of development, we may see that there have always been

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For this reason, they shall be considered within such a process of education that is distant from their own discoveries and judgements. (Piaget,1998)

prejudiced views against being entertained and even laughing. Plato has stated that we shall be purified from comedy and laughing for an ideal society. The philosopher Shelley has similarly claimed that mankind would not be able to have any progress if he was not to abandon laughing entirely.

Freud's approach repeats the idea revealing that entertainment is a search for happiness for those who are already unhappy of their existence, because the concept of unhappiness has always been regarded as un-understandable and unreachable within the modern western understanding. What Freud had meant by saying "The intention of man to be happy does not fit into the plan of existence", pertains to such theories that have found their supporters and lead to widespread acceptance of unhappiness as the destiny of man. The western approach has found the solution in presenting the pleasures of life under a more organized framework to make it become accepted by all. From such a perspective, there is no doubt that "design" has as well become a part of man's search for creating happiness. In designing all spheres of life, spatial settings and cities, the daily life and entertainment have emerged as different physical reflections of completely different spheres. By this way, while entertainment would find itself the massive grounds for development on the one hand, it has in a sense become limited and been taken out from many other essential spheres of life on the other.

Nevertheless, the idea of being entertained has been depicted as a threat for school and business activities. In business relations, management, courses or lectures, all of which are serious tasks to be accomplished, there is no room to entertainment. Within the existing order, the more down-faced one is or the more he or she sweats, the higher the success. This is the belief. Laughing, playing or making humorous remarks at work or at school are regarded as equivalent to flippancy. Nobody wants children to dance, sing, shout and jump at these places. All childish attitudes are forbidden due to reasons of minor importance. Those children who obey these rules are appreciated by their parents as well as their teachers. [45]

[45] Korczak mentions the risk of getting spiritually alienated to the child in the face of the target aiming at good generations to come. This is because when the adults impose the realities of life, they rather prefer approaching the child with the statement "I will create a man out of you" instead of adopting the idea of "what kind of a person can you become?" (Korczak, 2001).

The main source of limitation is the rebellion potential of children. The rebellious child may not want to act within norms accepted by the society.[46] It would also not be possible to impose anything under such circumstances. While this is taken as an important threat in terms of the continuity of economical and social life, the child's drive for entertainment becomes suppressed. As a result of this, a cheerless child who cannot feel the joy of life as it is devoid of any laughs or plays emerges as the most important outcome of such an understanding.

Courage to Create and Motivation

John Dewey, one of the well-known philosophers, has stated that playing games and being serious at the same time is possible and that it even is an ideal state of the mind. The most classical example for that is Thomas Edison. Having created 1093 patented products all his life long, Edison has said before the end of his long and productive life: "I have not worked even for a day in my whole life. It all was nothing but pleasure."

Besides voluminous researches on health that proves the impacts of laughing, being entertained and comedy against stress, there take place important scientific studies proving that it as well changed and extended the viewpoints and provided for mental flexibility. Other supporting studies reveal that creative people are those who also are open to learning, courageous and willing to take risks. As a matter of fact, Edison is a good example for a creative person who has made a total of 10.000 errors until he has discovered the electric bulb, however he has considered these mistakes not as failure, but instead has found the strength to repeatedly try until the end.

Therefore, it can be revealed that the special connection between entertainment and creativity may be similarly valid for the relations between creativity and courage. At this point, it is worth notice that Latin root (*cor*) of the term "courage" stands for living by heart. If the road to courage is the road to heart, then it is already possible to reach creativity through the heart, which is the sphere of intuitions and senses, in other words, it is inevitable to create with courage. The one who lives by heart shows the courage to go towards the unknown. He or she takes risks despite the possible dangers and then life becomes an entertaining set of experiences.

[46] Teymur claims that, beyond providing for the circumstances in being good at doing those things given, creativity is also a way of challenging the traditional beliefs and assumptions (Teymur, 1998).

The act of beginning to live by heart and move on towards the world of intuitions has to take place per se and within framework of the desire of the one to create his- or herself. Nevertheless, sometimes people are also in need of a stimulator that helps them find the courage to touch their self-essence, which means that they are in need of **"motivation".** On the condition that basic design education embodies such power within its main structure, in other words, in case it becomes an important instrument to help students discover their own potentials, only then can its main purpose be achieved.

Through which method and exercises?

The concrete steps to be taken through the adopted method and exercises are closely related with the way how the generalized series of concepts mentioned above are taken into consideration. It may be possible to speak of a different method only on the condition that the afore-mentioned spheres of design and pedagogy are restructured on basis of these concepts. Additionally, only within such a framework may education of basic design can be saved from being embodied as eclectic reflections of the complex experiences revealed under shelter of modern or post-modern processes of the local. Obviously, concrete steps necessitate fostering concrete proposals. Accordingly:

- The first step may be taken by managing a balance between theory and practice. This entails the skills to simultaneously have a control over the entire activity, while not overlooking any details. The skills to be mentioned here will mainly be those of the lecturer, supervising the course.
- Departing from the above-stated considerations, the educational method to be restructured shall not be expected to follow up any rapid course of development from today till tomorrow by any mistake. Here the intention needs to be on getting completely off from the progressive and pragmatic grounds of modern science and contrarily act according to the common power provided from the knowledge to be proliferated by each year.
- Finally, "entertainment" shall be adopted as one of the main components of the energy to be acquired within the educational method put in practice. Under conditions where the main purpose is to focus on creativity, it remains crucial to support the basic design course with entertainment-based exercises. Beside, on the condition that the mentioned purpose is kept in the foreground, entertainment will automatically become an inevitable experience

for the course and then the students will be provided with the capacity to alter their point of views in life.

In Dokuz Eylul University, Faculty of Architecture, Department of City and Regional Planning, it is possible to state that there has been a wide range of experience with reference to the Basic Design course. In long-years time, while there have been different approaches and coordinators of the course, which has given the course its richness, the main focus of the syllabus has been on the search for increasing creativity since the academic year of 2003-2004. The experimental studies of the last four or five years has proved that "being entertained" has evidently promoted personal development and most important of all, they altogether have aided in production of extremely creative designs. These experimental exercises have also shown that the impacts of the academic team of the basic design course, the studio environment and the attained grounds of motivation are each very crucial upon successful results to be achieved, as well. Such an educational method, which may therefore be named as **"designtainment"**, standing for "design through entertainment", emerges as the working grounds upon which terms of performance can be assessed from a variety of different perspectives and numerous exercises. Consideration of the performance shall also note the importance of awards received by students of basic design studios in various occasions within the mentioned period of five years. [47] The awards in different fields such as poster design, short film, photography and project design, shall be regarded as important indicators such that the resultant products have been accepted and appreciated in different platforms.

As manifest in all basic design studies, the design of an educational method is open to continuity and development, as well. Taking the departure point from the hints obtained so far, there is need for further development and

[47]* In academic year of 2003-2004, spring semester, the studies prepared for the course titled "PLN 107 – Basic Design" as the **"DEU Project of Reading the Urban Text"** have received the award of Respect to History / Local Preservation Awards 2005 on Preservation of Historical Environment Cultural Heritage from İzmir Metropolitan Municipality.

* In academic year of 2005-2006, winter semester, the studies prepared for the course titled "PLN 107 – Basic Design" under the theme of **"Planning the Future"** have received the 2nd degree award of short film and 1st degree award of poster design for **"Cities of the Future"** Student Competition organized under the 29th Colloquium for World Town Planning Day November 8th.

* In academic year of 2007-2008, winter semester, the studies prepared for the course titled "PLN 107 – Basic Design" have received the 1st, 2nd and 3rd degree awards of photography for **"The Street is Mine"** Photography Competition organized under the 31st Colloquium for World Town Planning Day November 8th.

enrichment of the roughly-stated framework based on specific concepts mentioned herewith this paper. Needless to say, such an enrichment process shall give special importance to sharing. For this reason, this paper intends to share some of the exercises accomplished under shelter of the Basic Design course. Through such exercises that turn design activity into a childish entertainment activity in the will to reach greater motivation for creative results to be attained, it is considered that theoretical discussions of a congress titled “Designing Design Education” shall further be enriched.

Assessment of Selected Exercises

Within framework of various approaches adopted in time, the context of exercises to be hereby shared involve those principles which:

- give central importance to development of abstract thinking,
- provide the courage and practice of questioning,
- are not confined to ‘form’ in exercises of perception and is open to progress from a wider perspective,
- considers the problem to be obligatorily formulated by the student him/herself,
- create awareness,
- avail for probabilities,
- are based on research,
- render share of knowledge as compulsory,
- support cooperative working and collaborative thinking,
- consider technique not as the target itself, but as an instrument to reach the target,
- in parallel with this, provide for the flexibility in using the current material and technological facilities whenever required for formulation of abstract thinking and better presentation,
- emancipate mind both in terms of the project concept and its presentation,
- involve manufacturing of designed products apart from the draft models of the abstract projects proposed,
- adopt a holistic understanding in consideration of design principles and elements (point, line, plane, texture, volume, structure, form and space) to be embodied in a design project, and
- are based on different phases of work (research, formulation, design, technical drawing, preparation of the 3-D model and finally manufacturing of the project with use of given materials).

There also have been additional results obtained from realization of the above-mentioned targets. While the creation of an interactive environment has been adopted as the previously-determined purpose, there could be

plenty of benefits obtained by this means. The groups of 5 to 8 students were organized with the energy of a collaborative work, which at the same time aided in development of team-working skills and the result could be depicted as success in the sense that the traditional educational methods could have been re-structured on basis of student-lecturer and student-student relations. The role of lecturers in the design phase of student teams have therefore gained further importance in guiding, encouraging and motivating the students.

EXERCISE 1 – ARTISTS: Abstraction of Famous Artists (December 2005)
Within framework of the studies determined for the final project of the basic design course, the students were asked to analyze in groups of 5 people the biographies of famous artists they were to select on their own and reflect their impressions of artists on a 2- and 3-D abstract designs by way of using their knowledge and skills obtained so far in the course. In this study, the groups were provided with every means of freedom (with only few limitations) in selection of the artists as well as in presentation of their abstract structures that represented their impressions of the main breakpoints of the artists' lives, personal characteristics, working methods or colours and techniques the artists used. Following the preliminary works held, the student groups have selected five artists, namely Escher, Picasso, Vincent VanGogh, Frida and Salvador Dali as their subject.



Figure 1-2-3. from exercise 1 – ARTISTS (December 2005)

EXERCISE 2 – TRACES FROM THE 21ST CENTURY: Abstraction of Hallmark Events and Phenomena that Dominated the 21st Century with Influences on both Global and Local Grounds (December 2007)

This exercise has been organized as a final project of the first semester with the intentions to create the grounds for curiosity for and research of historical knowledge as well as current developments and to avail for such an awareness that would make it possible to approach the existing problems

correctly. Similar to the exercise of artists, the students were also expected to come up with an abstraction based on the research findings they were to accomplish. The groups that consisted of 8 students each have made preliminary studies to determine their specific topics, which were identified as Global Warming, Natural Disasters, Terror, Obesity, High-rise Buildings, Communication-less and Resolution of the Genetic Code.



Figure 4-5-6. from exercise 2 - TRACES FROM THE 21ST CENTURY (December 2007)

Both exercises were formulated to have three different phases of study in order to provide for a holistic process within which the semester-long obtained knowledge and skills could be utilized. In the first phase, the detailed analyses of the selected phenomena and events were to be made and submitted as visual presentations. The second phase involved technical drawing of 3D projects given as plans, elevations, isometric perspectives etc., all of which were to describe the various subjects and themes adopted in the exercise. The third and final phase was determined as the 3D manufacturing of the designs via use of aerated (cellular) concrete (in dimensions of 25 x 25x 60'), colour (acrylic paint) and some special materials depending on each subject (such as fabric, rope, wire, mirror, timber, natural and artificial materials, light and music etc.).

In both studies, the final products were to be submitted as:

- Powerpoint presentations or short films
- Measured plans and elevations of the project,
- Isometric perspectives on required scale and extent
- Group logo (to be used in all studies)
- Posters
- Models, and
- Project Report.

Studies that have been the outcome of such formulation have followed considerably entertaining processes since they were held in sufficiently independent conditions and consisted of tactile and physical activities such as

cutting, fitting, painting etc.. The students have stated that the entertainment was in carrying out a childish playing activity and that use of various materials like stones, soil, water, paint, brushes, saw, hammer and similar tools increased interaction, courage and motivation as well. Furthermore, such studies have created the grounds for students to return to the child living in themselves. Additionally, the students have also expressed their feelings in appreciation of having participated in a study that gave the flexibility to carry out researches in fields they previously had no knowledge of and were curious about and to present their researches freely via use of various technological tools (Powerpoint, short film, photography, stop motion etc.). It has in fact been emancipation that was given priority.

The gains obtained from such a process have also given affirmative end-products. The successful projects of both exercises have been displayed in foyers of the Department for long periods of time. By this way, our educational experience appears to have been enriched with memories of such a designtainment understanding with its concrete indicators where the effort has been adopted as providing for emancipation on childish grounds and availing for creativity through this means.

RESOURCES:

JACK Foster: **Fikir Nasıl Bulunur,** Çeviren: Dinç Tayanç, Media Cat Yayınları, İstanbul, 2007
JANG Jon: "Öğrenciler İçin Mimarlığa Giriş, Temel Tasarım Dersini Yeniden Düşünmek", **Temel Tasarım / Temel Eğitim**, Odtü Mimarlık Fakültesi Yayınları, Ankara, 1998
KORCZAK, Janusz: **Bir Çocuk Nasıl Sevilmeli,** Çeviren:Deniz K.Çakıcı, Ütopya Yayınevi, Ankara, 2001
PIAGET, Jean: **Çocukta Dünya Tasarımı,** Çeviren: Refia Şermin, M.Ü. Yayınları, No: 461, İstanbul, 1988
POSTMAN, Neil: **Çocukluğun Yokoluşu**, (The Disappearance of Childhood) Çeviren: Kemal İnal, İmge Kitapevi Yayınları, Ankara, 1995
TEYMUR, Necdet: "Temel Milletler ve Müfredat Yanılgıları", **Temel Tasarım / Temel Eğitim**, Odtü Mimarlık Fakültesi Yayınları, Ankara, 1998

Vernacular Design As The Teaching Tool Of The Ecological Architecture

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ABSTRACT

We have a great accumulation of houses dating back from all different ages in Anatolia. Since the early samples of the houses and the settlements, environment is the key factor both for picking up the location and the shaping of the buildings. Anatolia had witnessed different migration moves from both directions due to its specific geographic location, and all the cultures that left their traces had created a big variety of houses, under different climatic conditions of Anatolia. As Hasan Fathy says " The building dwells from the land it belongs."

Our ancestors have survived, sheltering themselves in the traditional buildings which has been experimented through the ages. The people living in colder climates, have heated themselves burning wood or organic disposals. The people living on warm and humid climates have well utilized the air currents for minimizing the affects of humidity. The people living in the hot dry climates have faced other problems; the big temperature differences between day and night, and very low humidity. What they have in common is, they all have picked up the right forms, using the local building material, they have overcome the negative impacts of the climatic conditions. In vernacular architecture, not only the climatic problems were solved, but also the aesthetics, physical and social functionality were considered. For generations, they had provided comfortable life conditions and microclimates as a result of the great architectural experience.

Even there is a big technological achievement, it is stil quite not possible to have the same comfort quality in the modern settlements as in the traditional ones. Life styles are not reflected to the built environment and building shells are formed regardless to the climatic conditions, and most of the contemporary buildings are not integrated with the nature and the environment. But the purpose of all the different disciplines contributing to the building industry is the comfort of the people.

In summary, the vernacular architectures in Anatolia, have design features coping up well with the natural environment. The houses tell us about their geographic location, winds, elevations, precipitation, natural environment, the profession of the owner, and the local culture. The eveluation criteria is totally overlapping with today's ecological design concept.

In this context, you can ask whether the building experince carried out through the generations can contribute as much as the scientific knowledge to solve the ecological problems.

On this paper, “Environmental Design” course, - that I teach in Mimar Sinan University, Faculty of Architecture, in which the vernacular architecture is evaluated in ecolgical point of view, is going to be introduced.

In our country, there are not many samples of ecological design. But on the other hand, the country is very rich in forms of vernacular architecture. In our lesson of “Environmental Design”, studying those vernacular houses, in ecological context, is very efficient, as the students learn more depending on their own observations and evaluations. For the field study, the students are encouraged to choose the local architecture in their hometowns. It gives them some certain advantages. The students from the other countries, bring the samples from their own countries. Therefore, students have the opportunity of seeing a big variety of samples during the portfolio presentations.

On the paper, the course will be discussed as ecological design education model, and it will be supported by the students’ papers.

Key Words: *Ecology, Vernacular, Ecological Architecture, Vernacular Design, Environmental Design*

1.Introduction

Environment is the major input of the architectural design. Studying the traditional settlements, not only in Turkey but all over the world, environmental components; geography, climate, topography and socio-cultural facts have affected the building design. In different cultures, different climates, and different topographies there are much different architectural works. But the communities in different parts of the world, have solved their problems more or less in similar approaches.

But the present day buildings in our country can be called the similar type of uniform glass and concrete boxes, designed and built in every different town, landscape, and climate, neglecting the environmental facts, and the people belonginging to the different cultures are pushed to live in. In this approach, where the environmental facts are totally neglected, long term problems are faced for the sake of short term solutions.We should rather design and built with environment, co-exist with the environment instead of designing and building neglecting the environment.

Mary Catherine Batesone, in her paper of "Understanding The Natural Systems" (1997) explains this idea as below:
"I believe that with the shift from an emphasis on physics and engineering providing our metaphors to a period when the biology is the area that's really popping scientifically, we're moving into an area where we will be learning to design with nature. But all human patterns of adaptation are designed not so much by individuals as by communities that refine and adapt their patterns over long periods of time.But now we do it faster…When we think about design, we tend to think about material things: maschines, automobiles, houses, highway systems. But you can apply the concept of design social arangements, social institutions, educational systems, economic systems. We're going to have to design new patterns all of those levels, and they have to fit together. Our machines, our value systems, our educational systems will all have to be informed by this switch, from the machine age when we tried to design to shools to be like factories, to an ecological age, when we want to design schools, and families, and social institutions in terms of maintaining the quality of life not just for our species, but for the whole planet" (Batesone, M., C., 1997)

2. "Environmental Design" Course

Environment Designers are in charge of keeping the balance in between the nature and the human needs. It would be the beneficary to redefine the human nature relations, and solving problems in this context, rather than separating human beings from nature; this is for the well being of both the nature and humans. The architectural students should be gained this point of view, and the related information in the early years of their education in order to have them always searching for this human nature relationship, in the project studios of the advanced years.

COURSE TITLES:

1st Week: Designing the Natural and the Built Environment / Prof. Ali Muslubaş

2nd Week: House-Environment Interaction in Anatolia Through the Ages 1 / Assist. Prof. Dr. Selda Karaosman

3rd Week: House-Environment Interaction in Anatolia Through the Ages 2 / Assist. Prof. Dr. Selda Karaosman

4th Week: Environmental Influences on Shaping of the Houses around İznik Lake Village Settlements / Assist. Prof. Dr. Selda Karaosman

5th Week: Environmental Conditions in the Eastern Black Sea Settlement Patterns / Prof. Esad Suher

6th Week: Learning From the Local; Environmental Influences on Sustainable Settlements, Different Samples From the World / Assist. Prof. Dr. Selda Karaosman

7th Week: Environment in Modern Vernacular; Hassan Fathy, Rasem Badran, Balkrishna Doshi / Assist. Prof. Dr. Selda Karaosman

8th Week: Aesthetics in Nature; Natural Systems, and Shaping of Their Design / Assist. Prof. Dr. Selda Karaosman

9th Week: Nature As the Environmental Design Model, and Making Nature Visible / Assist. Prof. Dr. Selda Karaosman

10th Week Biological Design, and Principals / Assist. Prof. Dr. Selda Karaosman

11th Week Biological Design Samples / Assist. Prof. Dr. Selda Karaosman

12th Week Presentation of Seminary Works / Assist. Prof. Dr. Selda Karaosman

13th Week Presentation of Seminary Works / Assist. Prof. Dr. Selda Karaosman

14th Week Presentation of Seminary Works / Assist. Prof. Dr. Selda Karaosman

Table 1. Environmental Design Course, Syllabus

The “Environmental Design” is an elective course, in which we accept the students’ enrollments from different grades. (Table 1) The purpose of the course is to have the candidate architects introduced the “environment” concept in different ways, and to teach them ecological architecture using vernacular architecture designs.

2.1. Environmental Input to the Shaping of Houses in Anatolia Throughout the Ages

In “Environmental Design” classes, we teach the architecture students, the early samples of wind breakers which were built to protect the people from the natural bad weather conditions. (Figure 1) The samples of the early settlements in Anatolia, Cayonu, Asikli, Catalhoyuk, Hacilar Bogazkoy, Troy and Demircihoyuk settlements, and ancient Hellenistic city of Priene, and Byzantine era Cappodocia settlements explained in the environmental context. (Figure2,3,4)

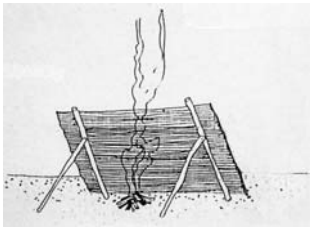

Figure 1.Wind Protection (Housing Settlement in Anotolia Houses1996)

Figure 2. Malatya Balaban / Cayonu (Sozen M.,Eruzun C.,.Anatolian Vernacular 1996)

Figure 3. Aksaray / Asikli (Housing Settlement in Anotolia 1996)

Figure 4. Cappodocia / Uchisar (Photograph by Selda K. Karaosman)

Throughout history, following the transformations of the life styles, and social structure, the type of shelters had been changed. The domesticated animals, the stored crops, increasing prosperity can be considered as the early major changes. The samples of traditional houses, belonging to this period, which expires up to our age in the rural parts of the country are shown, explaining the houses' characteristics involve lots of design input about the region it is built, the dominant culture of the area, the life styles and the economic structure of the inhabitants, locally provided building material and the properties of the natural environment where it is located.

In Anatolia, people lived in different climatic conditions for thousands of years. Since they started building their shelters, they have coped up well with the natural environment, and overcome the negative conditions. Our country has a great advantage, as it has all different type of climatic zones, and each different zone is rich in traditional settlements. We have the samples from:
-Temperate climate: İznik Village Settlements
-Cold climate: Erzurum
-Hot-humid climate: Antalya,
-Hot-arid climate: Diyarbakır, Urfa-Harran

The similar building forms, and shapings froom the rest of the world, where they have similar environmental and climatic conditions. For example, the similar conic domed structures of Syria and Urfa-Harran (Figure 5,6) or mud brick houses of New Mexico / Taos Pueblo and the mud brick houses which you would see almost all over Anatolian plateau. (Figure7,8)

Figure 5.Syria / Ebla
Photograph by Z.Gürler

Figure 6. Urfa / Harran
Photograph by Albert Gabriel

Figure 7.Taos Pueblo / New Mexico / Earth Buildings (Tumertekin E.,Özgüç N.,Beseri Cografya, İnsan,Kültür,Mekan, 1987)

Figure 8. Slopes of Agri Mountain Ararat, near Kars (Tumertekin E.,Özgüç N.,Beseri Cografya, İnsan,Kültür,Mekan, 1987)

Actually, this the biggest evidence of how important the nature is, in the shaping of buildings. (Picture 8,9) There would be different conditions within the same area; “in Iznik sample, within a small geographic area, we might talk about the different shapings of the traditional settlements of mountain villages, plain lands vilaage settlements, forest villages, and plateu villages.”(Karaosman S, 2004)

When ecologically evaluating the samples, the content of the course “Ecological Design Strategy and Methods, I – II” is reffered. Evaluation criteria is formed, after studying the valid assessment tools (BREAM, LEED, GBTool,…) commonly in use, and the analysis of the traditional settlements. (Table 2)

Some ecological design strategies explained supporting with vernacular architecture samples. The cisterns, used for collecting the rain falls, and very common in traditional settlements, and earth roofs with vegetation similar to the popular green roof approach of today. (Figure 9,10)

Figure 9.Cistern in Bodrum (http://www.bodrumbaglari.com/ Umudumuz: Yoremiz.html)

Figure 10.Asikuzeyir Village, Kars (Atlas dergisi, Temmuz 2006, “Son Ekokentler,) s.34

ASSESSMENT OF ECOLOGICAL PERFORMANCE
I.Analysis of Settlement
Analysis of Natural Environment
Settlement and site
Topography
Microclimatic conditions
Realitionship with sun, earth, air and water
Landscape
Natural Hazards
Geological conditions
2.Analysis of Built Environment
Relationship between houses
Infrastructure
Traffic Condition
Economical Conditions
Socio-cultural Conditions
Historical places
II.Analysis of Relationship with Outdoor and Garden
Relationship between outdoor and indoor environment
Vegetation
III. Analysis of Houses
1.Design
Building Form
Site Design
Space Organization
Interior Dimensions
2.Structure
2.1.Material
Using Material / Econonmic Performance
Material Production
Efficient Material / Ecolological material
2.2. Shelter
Thermal Comfort Conditions
Natural Ventilation (Windows, doors,...)
IV.Management / Maintenance
Changes and Additions
Maintenance
Waste-manangement

Table2. Ecological Evaluation Criteria

2.2. Evaluating the Present Day Situation / the Contemporary Architecture in Ecological Architecture Principals

Vernacular architecture is abondened due to it's been considered insufficient, uncomfortable, and useless in our country as in the rest of the world. The similar buildings appear in the different climatic zones without caring about the environmental conditions, and one city in one region looks alike to another one in another region. Designing using different materials, and technical gear, goes ahead of the tradition. Also, these designs have destructive affects on resources, as they do not resemble to the natural environment they are located in. Van Der Rayn summarizes the subject as below:

"Both urban planners, engineers and the othe other design professionals are trapped with standardized solutions which requires lots of energy and resources to complete. These standard templates which are unconciously adopted, and multiplied in big numbers, are easily accessible as instant receipts on the shelves. As a result, it might be called unthoughtful design which does not respect to the health of socities and ecosystems. (Van Der Ryan, S., Cowan, S., 1996) (But in vernacular architecture, we have the principal of not building the same in everywhere.) Vernacular can be seen more in the rural settlements. The settlements where we have the traditional buildings, and the modern buildings together, the problematic sides of the present day constructions are mentioned comparing them with the traditional ones. Present day seashoreline buildings from the popular resort town of Antalya are compared with the traditional settlement texture of the same town, where we see the multi-storey hotel compounds built along the seashoreline interrupts the breezes, which is vital for the cooling of the area. It is not only the tall buildings interrupting the breezes, the building form which makes the building over-heated due to solar affects etc. Then all these problems are tried to be solved by using technology – air conditioners. (Figure 11)

2.3. Vernacular Architecture Inspiring the Present Day Designs

Figure 11. Traditional buildings and seashoreline buildings.

There are two groups of architects, designing ecological buildings; the first group is more employing the advanced technological achievments, and the second group is employing the basic solutions depanding on the inherited experience and knowledge. Architects like Hassan Fathy, Rasem Badran, Raj Rewal are belonging to that second group of architects. They are well connected to the local building traditions and reject the architecture, which is not familiar to the built environment. "Hassan Fathy, as well as concentrating

building economy based on traditional building material and technics, climatic comfort possibilities, tectonic-aesthetic expressions of the traditional culture, he tried to reflect all the identity requirements of the family groups making the village population." (Yücel Atilla, 1994)

In the "Environmental Design" class, the designs of these architects, and their relations with the local architecture is studied as well. For example, Sana, Yemen is explained together with the analysisand the critics of the settlements by Rasem Badran. His recently completed buildings in the area are credited as the solution fort he ecological problems in the area. The ecological implications of the buildings are explained, indicating how well it is corresponding to the ecological principals.(Figure 12,13)

Figure 12.Yemen / San'a (Skylife magazine,2006-2)

Figure 13. Saudi Arabia / Riyadh King Abdul Aziz Foundation for Research and Archives (http://archnet.org/library/sites/)

2.3.Student Papers

As we advance in the subjects, in the 3rd or the 4th week of the course, the students are asked the pick up their paperwork subjects. They are encouraged to make research on the traditional architecture of their hometowns, which they are more familiar to, and it gives them certain advantage. They would understand the subject better, after the observations and the evaluations in the place they aremore familiar and confident. And the students from the other countries mostly study the traditional architecture of their own countries. This way, during the presentations, all students have the access to a very wide spectrum of samples from all over the country and the other countries as well. Students are asked to analyse and evalute their subject area's houses, as on the shown samples, and deliver the paperwork in poster form. There are not many contemporary ecological architecture samples in our country.

Some of the above mentioned paperworks' titels are as follows: "The Evaluation of Nomadic Shelter Systems in Mongolia"(Figure14, "Comparision and Evaluation of Safranbolu and Mardin", "Evaluation of Safranbolu Houses Thermal Comfort Conditions".

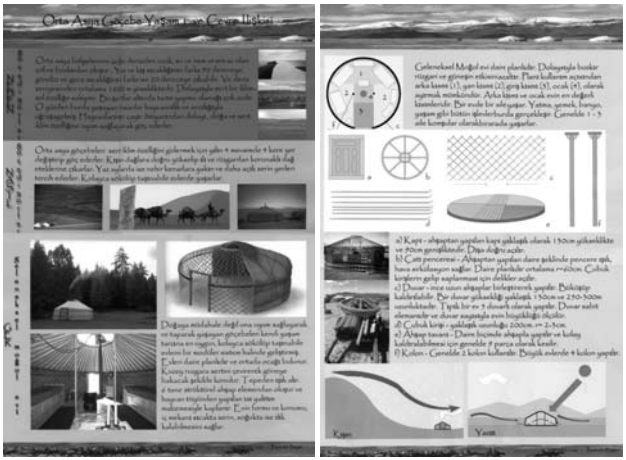

Figure 14.Students'Papers, "The Evaluation of Nomadic Shelter Systems in Mongolia 2007"

Further research is going on in order to develop the course. There is another design studio class proposed, as a continiuation of this course, where the students will be ecologically rehabilating, and improving these houses to the modern day requirments, or improving their performances by employing a little technology.

3. Conclusion

0The most of the present day settlements, building environment relations are neglected. The life styles of the people living in those buildings are not considered. The climatic problems are left to be solved by using technological devices. Nature and human health is not given enough importance. Vasting energy and resources is enormous. For all these reasons, it is vitally important to record the the ecological principals in the traditional settlements, and to interprete them for determining the criteria to inspire the present day designs.

Environmental design course is important in the context of teaching ecological architecture, especially when the subject i becoming more and more popular. Teaching the course in the early years of the architectural education program, gives the benefit of gaining the student a certain ecological perspective and awareness both for the advanced years of the education and the professional life; how the climate is input into design, utilizing wind and solar affects in order to reduce the energy requirement of the buildings… As the course is optional, it is open to all the students from different years. But it should be obligatory for the early years' programs, as ecological architecture is not a choice, it is a must. And architects should give up, designing and building more uniform standard glass and concrete buildings, try to produce more location specific solutions, considering natural environment as a design input factor.

Therefore, it is a very proper approach to use the traditional architecture as the teaching tool of ecological architecture. And the absence of the present day samples, and the worries of showing samples to students, makes the subject even more important.

References

Batesone, M., C.,(1997) "Understanding Natural Systems ," Design Outlaws on the Ecological Frontier",pp 92

Karaosman K. S., (2004) A Proposal of Ecological Assessment Model for Traditional Rular Settlements: İznik Lake District Village Houses, MSU, İstanbul, pp 109.

Van Der Ryan, S., Cowan, S., (1996), Ecological Design, pp 3-4

Yücel A., (1994) "Hassan Fathy ve Sedad Hakkı İki Mizaç İki Mimari" Hassan Fathy, pp77

COMPREHENDING FIRST YEAR DESIGN EDUCATION

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ABSTRACT

Introduction

The course of Interior Architecture of the Faculty of Architecture in Syracuse, treated during this year the design of Interiors of public or private spaces.
The debate, born during the course, was to integrate theory and practice in design university education. The design exercise wanted to start, develop and conclude an architectural project at the scales of architectural design.
We think, basing our work on the studies of the German psychologist Kurt Lewin - the promoter of topological psychology -, that space and people influence human behaviour. So space was thought in function of the subject that used it and in function of its relationship with objects.
Any architectural system was planned inside an existent built contest of Syracuse. The interior design was thought as design of a restoration project or as an integrated part of a new architectural project.
New and restored residential and commercial spaces were located inside the *Santa Lucia's* neighbourhood, on the boundary line signed by the traces of a railway system out-of-use.
We proposed a new shape for architectures, restoring significant buildings and replacing the gone bad ones with new architectures that looked for a formal research devoid of any mimesis.
Cultural and pleasant spaces, situated in *piazza Adda*, represented the head of a cultural system that ideally should colleague the historical, the Greek and the Roman archaeological urban monuments.
Interpreting the urban ancient ruins as explanation and justification of our cultural roots, the course orientated the interventions on the realization of public architectures that should create a cultural urban system that, based on the active participation of citizens, should offer possibilities of cultural intermediation.
The Museum of archaeological architecture and the Modern and Contemporary Art Museum introduced visitors to the dialogue between the ancient and the actual cultural patrimony in the stratified urban status of Syracuse.

Materials & Methods

After interviewing the citizens and planning those new urban landscapes, the students examined interior spaces, treating moving design and static design (walls, flours, vertical and horizontal elements), lights and materials. The course integrated theory with practical exercises during which this design experience has been done by single students or by groups.
The result of the team working has been a project structured in: typological and functional analysis of the architectures proposed; graphic reproduction

(scale 1:100, scale 1:50) of plans, prospects, sections, models to evidence the interiors; quoted and furnished spaces;
The individual work done by students consisted in designing some interiors spaces in scale 1:20 and 1:10.

Results and Conclusions
The project has been presented with: quoted plans, sections and prospects; architectural models and interiors models; drawings in perspective.
The examination consisted in the exhibition and in the discussing of the exercise drawings. Practical experience helped the students to show the knowledge of the concepts treated during the course. Students showed to be able to use principles of dimensioning used spaces, to plan moving and static design, to calibrate natural and artificial light and to design lights and materials.

Keywords
Public – private – space – interior - design

Introduction

We think that the Architecture's doctrine is ruled by "Vitruvio's triad": *Utilitas, Firmitas* and *Venustas*. The *Utilitas* is referred to social doctrines, the *Firmitas* is ruled by construction sciences and the *Venustas* by aesthetic arts.

We based our aesthetic research on the study of two aspects treated by philosophical studies: the "Structuralism" and the "Gestalt Theory".

The American "Structuralism" was referred to Charles William Morris ideas that were based on the behaviourist theories of social uses of one space.

"Gestalt psychology" was born on the ideas of M. Wertheimer, K. Koffka e W. Kohler, that in 1921 edited the review "Psychologische Forschung", closed in 1938.

When the Gestalt theorists went to the United States of America they influenced American psychology, mitigating their behaviourist ideas and opening minds to perceptive processes.

The North American psychology also modified the original "Gestalt Theory", moving interests from perceptive to social behaviour.

That evolution was testified by the studies of the German psychologist Kurt Lewin who has been the promoter of topological psychology.

We think, basing our work on the ideas of K. Lewin, that space and people influence human behaviour. So, during the course's exercises, spaces were thought in function of the subjects that used them and in function of their relationship with objects.

We kept up, in our course, an architectural design that should gratifies men, involving them in its perception and making them active subjects in their relations with architectural space.

Strictly related with "phenomenology" the "dynamical" principle is one another useful aspect of the Gestalt psychology. It says that the forces auto-rule themselves following dynamical interior instances. Auto-organized forces usually follow the most balanced structure, the most regular and symmetric, on the base of the principle of the "good shape" formulated by Wertheimer.

During the course's exercises space's forms were planned working on their generative and dynamical aspects and were imagined as created by forces. Students have thought the architectural compositions as the places of investigation of spatial energies that could cause transfers, rotations, deformations, infolding, and used those spatial relations that implicate the notions of proximity, discontinuity, connection, opening, closing, border, including.

The debate born during the course was to integrate theory and practice in design university education. The design exercise wanted to start, develop and conclude an architectural project at the scales of architectural design.

Syracuse, *Santa Lucia's* neighbourhood

In the historical parts of the city of Syracuse the physic relationship between open and built spaces is generally defined in terms of proportions and perceptive qualities but in this part of the actual city open space is the void resulting by having casually located on the territory buildings and areas out-of-use denote residual forms of urban landscape. Student's work starts by the analysis of the fragmentary characters and of the discontinuity owned by the morphological actual status of this part of Syracuse and wants to criticize every planning idea that wants to solve city's and territory's problems with just one solution.

Margins or border urban areas, are often located where is built a railway system or a superhighway or where the city ends on the seaside. These places usually suffer precarious actions of transformation. The spaces can be classified into the categories of boundary. The voids are frequently shapeless or create endless labyrinths. They are untidy and confused but represent a laboratory where we can structure possibilities of urban qualification. Urban planners interpret the landscape value of those places and configure the project as a "fragment" into discontinuous and diversified spaces.

Instead of giving right of priority to the organization of centre of the city and to its stratified nature, giving the sense of urbanity only to that built reality that shows those concepts of continuity and of spacing relationship usually owned by the historical city, we have interpreted the border line of *via Arsenale* as a new potential urban centre.

The students, trying to answer to the questions that the teacher asked them on the maritime areas located on the edge of the historical *Santa Lucia's* neighbourhood, have studied the morphological characters of the urban status that suffered alterations caused by the presence of the port or of the railway system.

In that territory, signed by the rests of the railway system out-of-use, where discontinuity and heterogeneity are the rule, the students

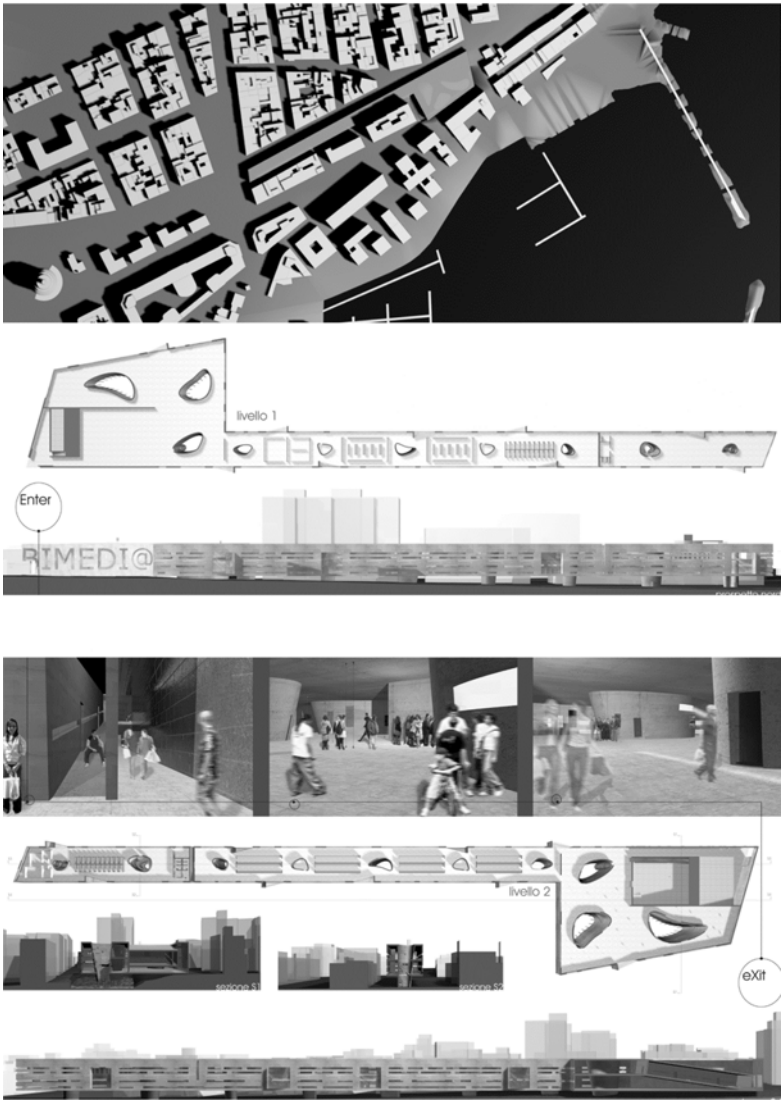

Figure 1. Andrea Alì, Andrea Todaro. *Via Arsenale*, project of a public library, general plan, first floor, second floor, prospects, interiors.

Figure 2. Valentina Santuccio. Interiors of a new residential building located in Santa Lucia's neighbourhood

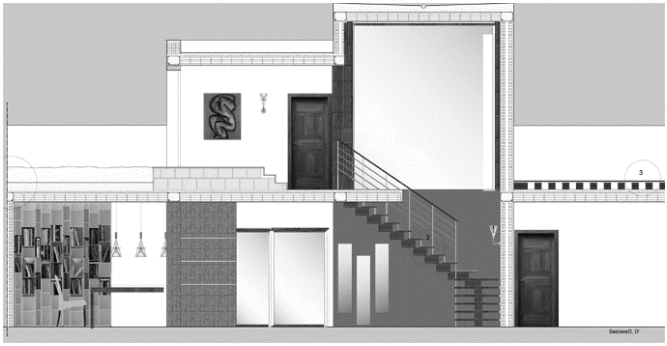

Figure 3. Valentina Santuccio. Interiors of a new residential building located in Santa Lucia's neighbourhood

decide to configure the area creating local connexions with the identity of the surrounding historical *Santa Lucia's* neighbourhood. Public new buildings become new urban frontiers and identifying

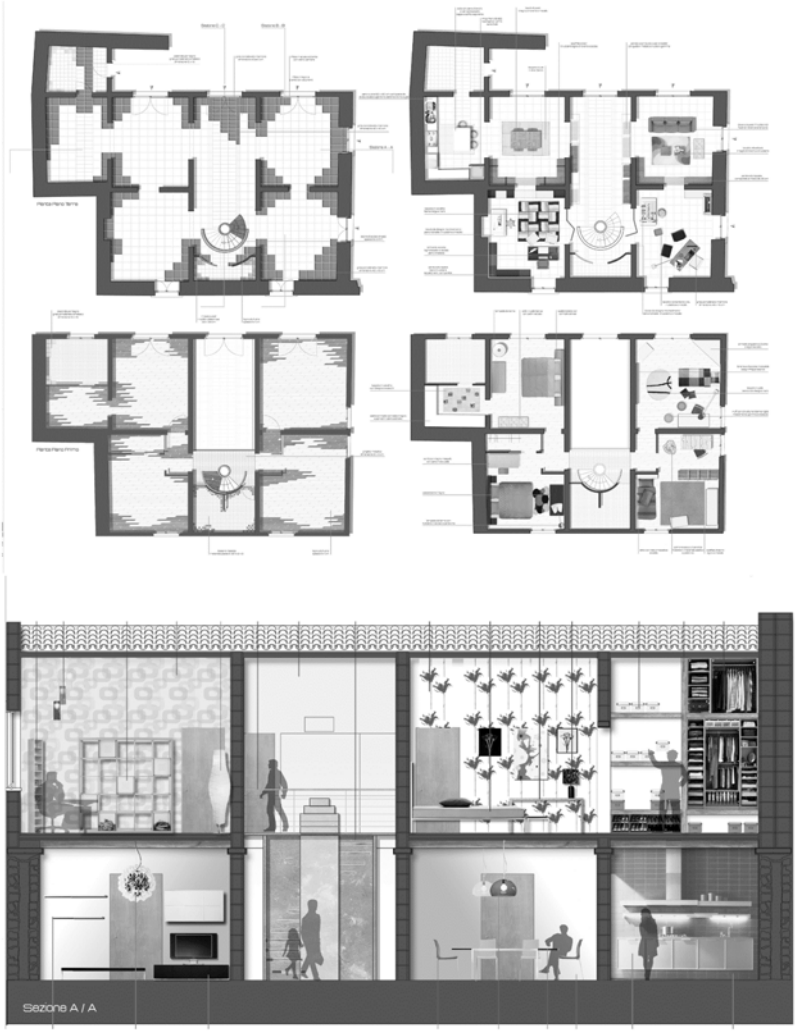

Figure 4. Gianluca Indelicato, Claudio Inserra, Luca Orazio Scuto. Interiors of a restored residential building

urban elements and try to connect the relationship between citizens and their city (figure 1).
The students' work, conscious of the actual architectural debate, offers an intelligent mediation between the shapes and the contents

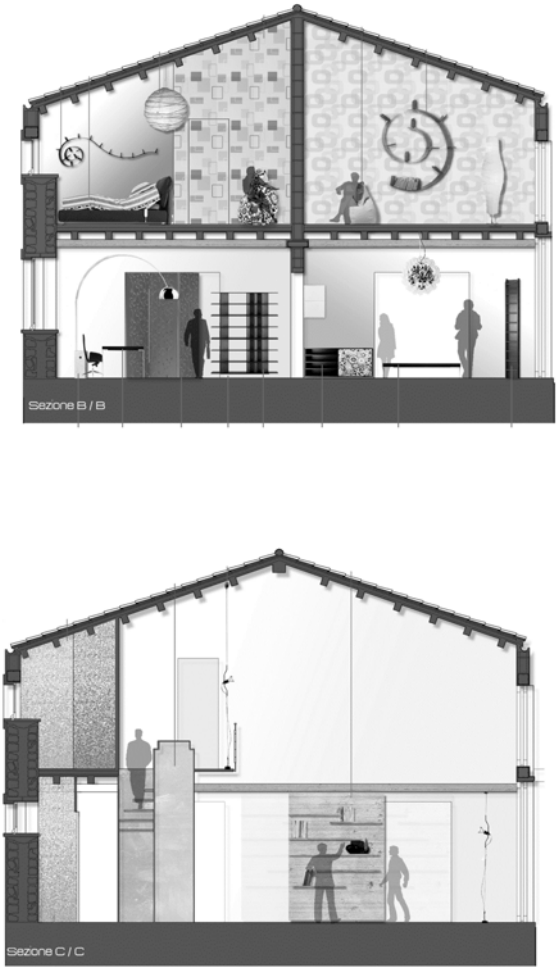

Figure 5. Gianluca Indelicato, Claudio Inserra, Luca Orazio Scuto. Interiors of a restored residential building

of the pre-existent buildings and a planning idea that becomes the manifestation of the interpretation of the paradigms offered by urban history. They try to build an urban habitability by confirming the streets' texture and by locating a new public important architecture. The project of the public library of Syracuse represents the project of a social architecture where citizens can identify and recognize and could make a name for themselves.
New and restored residential and commercial spaces were located inside the *Santa Lucia's* neighbourhood, on the boundary line signed by the traces of the railway system out-of-use. We proposed a new shape for architectures, restoring significant buildings and replacing the gone bad ones with new architectures that looked for a formal research devoid of any mimesis.
So the areas could become rich of new structures useful to fill cultural collective necessities and to revitalize what is out-of-use.
After interviewing the citizens and planning those new urban landscapes, the students examined interior spaces, treating moving design and static design (walls, flours, vertical and horizontal elements), lights and materials (figures 2, 3, 4, 5).

Syracuse, Museum of Archaeological Architecture and Museum of Modern and Contemporary Art

By confronting the numerous ancient urban traces of the urban status with modern or contemporary architectures in Syracuse the dialogue between the actual and the ancient cultural landscape results upset by distortions heavily paid in terms of urban and environmental disequilibrium.
However the fragmentations did not avoid this area from generating originalities coming from the residual relationship with historical traces.
The sense of the places seems to rise again by reinforcing the relationship with cultural landscape values. So the students wanted to qualify the archaeological urban monuments by ideating new tourist or pedagogical ways, and restoring historical pre-existences or planning new buildings where the city could guarantee the conservation, the knowledge and the public fruition of those "documents-monuments" that are public memories and the basis of local and global identities.

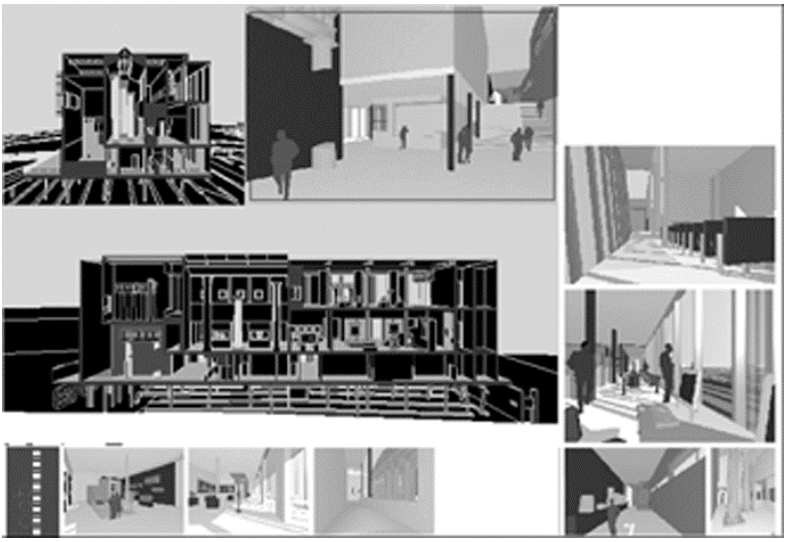

Figure 6. Alfio Forte, Christian Quadarella. Museum of Archaeological Architecture, Syracuse

Although it is true that the heritages of the aesthetic of the ruins today yet exist and consist in the idea of the beauty of antiquity, in the charm of the fragmentary discovery, it is also evident that it is necessary to insert the ruins in a contest of utilization and fruition able to correctly interpret the distance existent between the culture
expressed by the ancient site and our contemporary visitor's one. We must offer every form of mediation to make him correctly enter into the meanders of an aesthetic new for him.
Into this point of view it is generated a concept of museum that avoiding of conducing the interventions of fruition just on the protection of the ruins, that in this way should become museums of themselves, wants to extend its actions, where the contemporary urban landscape still allows it, to new areas where we can create protected spaces, related with the ancient sites (figure 6).
Cultural and pleasant spaces, situated in *piazza Adda*, represented the head of a cultural system that ideally should colleague the historical, the Greek and the Roman archaeological urban monuments.
Interpreting the urban ancient ruins as explanation and justification of our cultural roots, the course wanted to orientate interventions on

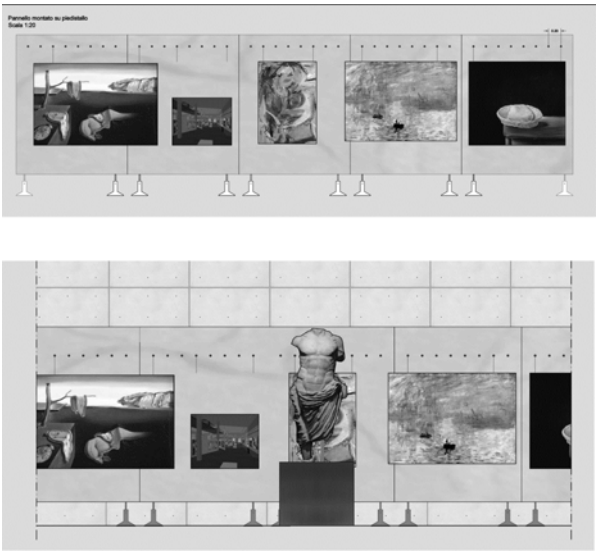

Figure 7. Daniele Marotta, Graziella Scavo. Museum, piazza Adda, Syracuse

Figure 8. Barbara Bruno, Claudia La Magna. Museum of Modern and Contemporary Art, Syracuse

the realization of public architectures that should create a cultural urban system that, based on the active participation of citizens, should offer possibilities of cultural intermediation.

The Museum of archaeological architecture and the Modern and Contemporary Art Museum introduced visitors to the dialogue between the ancient and the actual cultural patrimony in the stratified urban status of Syracuse.
the students examined interior spaces, the art and the archaeological preparations, treated moving design and static design (walls, flours, vertical and horizontal elements), lights and materials (figures 7, 8).

References

AA.VV., (1994), *Siracusa urbs magnificentissima*, Electa, Milano
Caniggia G. and Maffei G. L., (1979) *Composizione architettonica e tipologia edilizia*, Marsilio, Venezia
Choay F., (1992), *L'orizzonte del posturbano,* Officina, Roma
Clementi A., (ed), (1990), *Il senso delle memorie,* Laterza. Roma
Costa M. E., (2001), *La città come testo, un laboratorio progettuale per la città del Mediterraneo*, Gangemi, Roma
Eco U., (1996) La struttura assente. La ricerca semiotica ed il metodo strutturale, Bompiani, Milano
Kandiski V., (1996) *Punto, linea, superficie*, Adelphi, Milano
Katz D., (1992) *La psicologia della forma*, Universale Bollati Boringhieri, Torino
Klaus Koenig G., (1963) *Architettura e comunicazione,* Firenze
Martì Aris C., (1994) *Le variazioni dell'identità. Il tipo in architettura*, Città Studi Edizioni, Torino
Morris C. W., (1938) *Fondamenti di una teoria dei segni*,
Morris C. W., (1946) *Segni, linguaggio, comportamento,*
Perego F., (1987), *Memorabilia: il futuro della memoria 1 Tutela e valorizzazione oggi*, Laterza, Roma-Bari
Rossi A., (1978) *L'architettura della città*, Clup Edizioni, Milano
Rykwert J., (1977) *La casa di Adamo in paradiso,* Mondadori, Milano
Ugo V., (1991), *I luoghi di Dedalo,* Dedalo, Bari
Wertheimer M., (1912) *Studi sperimentali sulla percezione visiva del movimento*

Discovering the Personal Reason for Architecture Education

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ABSTRACT

This paper is going to discuss architectural knowledge, as the architect's personal knowledge that is acquired through his/her life time, with the guidance of Michael Polanyi's theory of Personal Knowledge. In this regard, an architect's personal knowledge would briefly be described as the collection of his/her memories acquired through personal experiences which is improved by the way s/he integrates available information about the objects of that experience. Parallel to Polanyi's argument that all knowledge is personal, which means that learning is indeed an individual process; the idea should be to make the students discover their own reasons for enlarging their personal knowledge.

As Polanyi argues for all the educated people, who have developed their own personal methods for comprehending the meaningful wholes, the architects learn, assimilate and internalize information that they meet within their experiences with them. This experience does not only necessitate the designing skill that they gather by the help of their coaches in design studios; but, also the skill of understanding all the aspects of an existing architectural whole and comprehending that whole. The important thing is that such an improvement of the creative skills of an architect cannot be limited with the school years of academic training; because, the act of comprehension and therefore, experiencing architecture does not end at any time unless mental powers are lost. As the major form of cognition in learning how to design, learning by experience, a major part of which is tacit, occurs together with the act of taking one's own responsibility for learning.

Following these arguments, this paper considers architectural design education as a means for exploring and discovering one's own world through his/her personal knowledge and has much more to do with an internal power of the will to comprehend the world than with the power of the will to be a 'high cumulative student'. However such a point of view does not always shape the behaviors of the studio professors. This paper declares about the impressions that although there are plenty of studies that have been continuing to emphasize the inconsistent personal backgrounds and viewpoints of the students who are beginning architectural education, there might be a persisting false assumption in this regard. The paper is going to give the clues and argue about the general assumptions that continue to

persist concerning the confusion between the responsibility of the students on choosing their educational life on architecture and their responsibility for being passionate for participating in the world of architecture. Becoming a part of the world of architecture necessitates experiences of comprehension of that world, which most probably would not have started before architectural education.

Keywords: *beginning architectural education, creativity, tacit knowledge, act of comprehension, heuristic passion*

Discovering the Personal Reason for Architecture Education

The experience based learning as the characteristic of architecture education makes it necessary to adopt the development of architectural knowledge as a life-long learning process. As Duffy also states, a large portion of architectural knowledge is practical.[48] The development of behaviors and skills especially in practical design thinking is the consequence of personal experiences the knowledge of which is mostly inexplicable (tacit). As Polanyi defines, tacit knowledge is basically the inexplicable knowledge that is acquired over a long period of time with the joint weight of all personal memories of observations and experiences.[49] According to Polanyi's theory of Personal Knowledge, the act of comprehension is the means to develop personal knowledge, a big portion of which is tacit.[50]

With regards to this discussion, having the characteristic of being mostly practical, architectural knowledge is indeed personal knowledge, which is developed progressively through life-time. This means that the distinguished educational periods of life as the pre-university, university, professional practice and so forth are not less or more important than each other for the personal knowledge development. Accordingly, the pre-university period of the students of architecture, for having a very important role in their personal knowledge development with their habits of comprehension, and skills for creative thinking deserves considerable attention for those who are interested in architecture education, especially the studio tutors.

When the concern is the insufficient personal education of the pre-university period, it is proper to look at common criticisms on institutional architecture education in Turkey. In order to understand the discussions for the case in Turkey, drawing a timeline might be a proper way to follow for understanding the external supports on personal knowledge development of an architect with the successive periods of pre-university, university, after university, and professionalism (practice and maturity) when the architects' life-long learning is considered. When we look at this timeline as a whole we would see that it

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[48] F. Duffy, "Education in Architecture." *Educating Architects* (London: Academy Editions, 1995: 120)

[49] :M. Polanyi, "Knowing and Being." *Knowing and Being: Essays by Michael Polanyi* (Chicago: The University of Chicago Press, 1969: 165)

[50] :M. Polanyi, "Understanding Ourselves." *The Study of Man* (Chicago: The University of Chicago Press, 1959: 29).

is not proper to claim that architecture education starts at the university education period. It is a common consciousness in Turkey that the students of architecture are not ready to comprehend the aims and the scope of architectural education, which inevitably includes the development of the creative thinking skill. It is also a fact that in Turkey, it would be a total misassumption that the students of architecture know what they want and what they will encounter in architectural education even if they have willingly decided to become an architect. It is also important to note that a willful decision of architecture education is not usually the case when the students have more than one choice for their intended professions about which they know quite a few.

It is indeed commonly accepted that the pre-university period is a very important portion of the life-long learning process of the architects because of the significant differences in the education systems of the pre-university period and university period of architecture students. As T. Aytaç-Dural also underlines, the pre-university education has an exceptionally significant character of obstructing the creative free thinking of the students.[51] Similarly, Denel states the students face every obstacle possible to dull their curiosity for their environments that is necessary for becoming a designer.[52] Such an obstruction is very critical especially for the suppression it generates for the children at the age of their primary and secondary education that produces unbreakable obstacles for the improvement of their creative skills.[53]

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[51] :T. Aytaç-Dural. *Theatre-Architecture-Education: Theatre as a Paradigm for Introductory Architectural Design Education*, (Ankara: METU Faculty of Architecture Press, 2002: 14)

[52] B. Denel, "Temel Tasarım ve Değişim." *Temel Tasarım/Temel Eğitim* (Ankara: METU Faculty of Architecture Press, 1998: 52)

[53] Related with this Gropius asserts that “Creativeness in the growing child must be awakened through actual working with all kinds of materials in conjunction with training in free design.” Moreover, adds he “…[i]mperceptibly guiding the child during the very difficult transition from play to work, the teacher – besides giving it the scientific facts and technical advice – must encourage him again and again by trying to stimulate his indigenous inspiration,”

::W. Gropius. *Scope of Total Architecture*, Ed. R. N. Anshen, (New York and Evanston: Harper & Row, Publishers, 1955: 44)

This obstruction of the development of the creative skills can be explained with reference to Polanyi's theory of Personal Knowledge, which underlines the necessity of learning by comprehension as experience, for the internalization of information as knowledge. Looking through this direction it is visible that the information-based education system of the pre-university period, which generates the tendency to memorize with an overloaded curriculum by leaving no room for the student to improve creative skills, is also an obstruction for the improvement of personal knowledge. Following Aytaç-Dural's inferences for the distinctions of the pre-university and university periods; the 'learning act' by "passive listening" rather than "active participation", 'learning' from "ready information" rather than "exploration", 'evaluation' by means of "multiple-choice testing system" rather than "multiple authorities", and staying on the "safe ground" rather than "risk-taking", focusing on "success" rather than learning from "failure", generating the "self-centered child" rather than a "self-confident individual"; can by no means be legitimated on the grounds of Polanyi's theory of Personal Knowledge as a convenient basement for improving personal knowledge.[54] Indeed, none of the characteristics attributed to the pre-university education period either in school or in adults' guidance[55] has aspects to generate a confidence for selecting and jumping into a not-given problem (a problem of their own), to generate a heuristic passion to constitute a heuristic act for a solution. Denel also agrees that the beginning architectural students, who are usually declined in their personality and used to accept everything that the instructors mention as 'true', also lack a very big amount of knowledge and skills for acting creatively.[56]

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[54] Aytaç-Dural, *Theatre-Architecture-Education: Theatre as a Paradigm for Introductory Architectural Design Education*, (2002: 16-9)

[55] As Aytaç-Dural quotes from Torrance and Denel in *Theatre-Architecture-Education: Theatre as a Paradigm for Introductory Architectural Design Education*, (2002: 14), according to both, adults have a tendency to obstruct the creative side of children by discouraging them from free thinking.

E. P. Torrance. *Guiding Creative Talent*, (New Jersey: Prentice-Hall, Inc., 1962: *13)*

B. Denel. Temel Tasarım ve Yaratıcılık, (Ankara: ODTÜ Mimarlık Fakültesi, 1981: x)

[56] Denel, "Temel Tasarım ve Değişim." (1998: 48)

When these characteristics of the pre-university period are considered, the university years of architecture education appear as a transition period for the development path of personal knowledge. Especially the first year of this period deserves noteworthy attention as the turning point from the evaluation of memorized ready information to internalized personal knowledge. The transition of the first year architecture education may be interpreted as a re-introduction of the personal dimension of knowledge to the students, which is going to be a necessary part of the professional architectural knowledge that is the architect's personal knowledge.

At this point, it is proper to re-remind the possible misleading attitude of the first year studio tutors against the disinterest of the students in the design education, which is indeed a very natural consequence when their previous experiences, behaviors, habits, ways to succeed, and expectations are considered. It is apparent that looking from the Polanyi's point of view both the primary and secondary education that continues to build up the students' tacit powers in a different and opposing way than the architectural education. The problem is simply excluding the personal dimension from knowledge and dictating to students that everybody must know everything in the same objective way. A very clear evidence is the testing and examining system that is used during the secondary education, which are evaluated by a single answer key, with questions that must have only one answer that should be given in the same way by each student, where it is still possible to cheat in the exams instead of memorizing the expected "only one" answer, both of which have no cognitive value at all for the development of personal knowledge of the students, especially in the way that Polanyi asserts. We see that as a consequence the students do not have a habit of having their own ideas, because what is expected, evaluated, and graded is not personal ideas and knowledge but the expected answer keys; they have not needed to have their personal knowledge. When this is the case, would not it be too much to expect from the first year students a completely conscious will for architecture education?

The scope of this paper is not to defend the unable situation of the students; on the contrary, it is expected to display the defeats and dangers of the current condition and the necessity to take precautions accordingly. One main problem that is believed to be of vital importance for the first year architecture education is the possible attitude of the professors that assumes the students being conscious and passionate about how to acquire architectural knowledge and having a 'natural' interest in this concern. The interesting point is that this attitude coexists with a common complaint about the insufficiency of the pre-university education especially in terms of not letting the students develop their own means for comprehending their environments and learning through it. It is apparent that it is expected from the students to fill this gap and behave accordingly. However, is it possible

to say that there is a distinctly taken responsibility by the tutors to help them to fill it?

When the theory of Personal Knowledge of Polanyi is examined, it is understood that learning is a personal act and is a consequence of the act of comprehending a meaningful whole with all its subsidiary parts. States Polanyi, with the act of comprehending a new meaningful whole, its parts which we think we know also gains new meanings from which we learn different potentials of things in our environment. According to him this is the irrevocable enlargement of man's world, which also means that s/he also changes his/her viewpoint, assumptions, belief in the new potentials of things.[57] This means that looking from the Polanyian perspective, we may think that the courage to jump into a difficult and matchless problem, the ability to see the hidden behind the available, and the belief in the idea 'impossible is nothing', which are the fundamentals of the creative design skill, can only be the outcome of a developed personal knowledge, and personality with the ability to comprehend new meanings of life.

It is evident and also touched by Polanyi[58] that the basic needs of this skill are the passion to solve an original problem, which comes about as the heuristic act, and the passion to enlarge ones world to fill the gap between what s/he can do and want to do. Polanyi calls it the 'heuristic passion' with which the problem and the intended idea incubates in one's mind until reaching a satisfactory solution. Here the question is how it can be possible to have such a skill to ask an original problem and be passionate to solve it. It is possible to think that the desire to learn is the basic force that triggers this passion, which also renders the design process enjoyable. Whatever it is, the necessity is the motivation for this task. But, what is motivation? Why is it needed this urgently?

In order to answer these questions, we need to go back to the discussion of creativity. In order to be able to develop personal knowledge one has to act creatively, which means that one has to be able to understand new meanings of life through the act of comprehension. From the point of existential phenomenologist thinking, which is also adopted by Polanyi, it is the desire to feel one's own existence in life that keeps him/her motivated, and makes him/her discover him/herself.[59] This corresponds to being able

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[57] :M. Polanyi, "The Calling of Man." *The Study of Man* (Chicago: The University of Chicago Press, 1959: 67)

[58] :Polanyi, "Knowing and Being." (1969: 131-2)

[59] In light of the existential phenomenological influence, Polanyi states that the problem of pure objective knowledge can be studied only when the

to find the meanings of things in life, such as the works of art and architecture, and create new meanings as well, in order to prove his/her existence to him/herself.

Therefore, motivation needs the experience of the act of comprehension. For the professors the primary question that should be asked is about how it can be possible for the students to have a special interest in architecture when there is hardly a chance for them to have been experienced any act of architectural; let alone environmental comprehension. It this sense, it is believed that blaming the students for not knowing how to comprehend and for not being motivated would simply be an escape from the responsibility as tutors. The reason for this is that the students especially in Turkey most probably have not confronted a motive and a force to make them discover themselves, and their potentials for becoming creative personalities.

In The Universal Traveler, which as Denel suggests is not used in architecture education program in Turkey as a guide for the self-development of the creative ability; it is advised to be self-motivated to the design students. This means that Koberg and Bagnall's book considers the act of motivation for the solution of a problem, which is highly related with the argument of this study about the heuristic passion, as a responsibility of the student.[60] This consideration appears quite relevant with the undertaking of the self-responsibility for learning; however, this does not mean that this issue should not be considered in the design of the exercises by the tutors. At least the students should be allowed to understand that they are expected to motivate themselves for their problem-solving processes. The book advises the students to take every problem as a challenge for self-motivation, which is called as "the generator of the process."[61] It is important to note that Denel appears to be quite interested in the personal motivation in the design process; however, he has not offered any solution or proposition on developing and maintaining it.[62]

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distinction between tacit and explicit knowledge and the decisive power of tacit knowledge is recognized. :Polanyi, "Understanding Ourselves." (1959: 12-13)

[60] :D. Koberg and J. Bagnall. *The Universal Traveler: A Soft Systems Guide to Creativity, Problem-Solving and the Process of Researching Goals*, (Menlo Park, CA: Crisp Publications, 2003: 11)

[61] Koberg, *The Universal Traveler: A Soft Systems Guide to Creativity, Problem-Solving and the Process of Researching Goals*, (2003: 17)

[62] Denel, *Temel Tasarım ve Yaratıcılık*, (1981)

On the other hand, although it is not a common discussion for today's basic design education agenda, in the history of the basic design course, we see familiar intentions for achieving students' motivation for the creative behavior. For example, Itten has generated and applied several methods for providing what he calls "the necessary atmosphere for creativity." He has applied the idea of starting the instruction with a prayer or a song in order to "concentrate the students' wondering thoughts" and enabling their "mental and physical readiness for intensive work through relaxing, breathing and concentrating exercises."[63] Such an attitude is interesting especially when considered with the time and context that it occurred; because, in the case of Bauhaus there was an obvious agreement for the need of a new attitude in the unification of the design thinking and mass production and an intellectually supported consciousness about the design thinking of our era in the students' minds such as the understanding of and opposition for the romantic individualism.[64] Remembering the discussions about the problems of architecture education in Turkey today, it is clear that the case is not the same with that of the post-war Germany and a need for motivation for making architecture an aid for personal knowledge development is much more necessary than that of Itten's time.

Blaming the students for not having an interest in architecture is an attitude that disregards their educational behaviors, let alone their underdeveloped skills of comprehension. It must be admitted that it is usually if not always the first time that the students question what architectural comprehension is, in the first year of architecture education in the university. Having chosen and decided to become an architect and having entered the department, it is the students' task to develop their skills for comprehending architectural meanings, which is the only way to have a real interest and passion to become an architect. It is far more than the will to be a successful person; it is the discovery of ones self and knowledge through the medium of

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[63] J. Itten. *Design and Form: The Basic Course at the Bauhaus*, (New York: Reinhold Publishing Corporation, 1964: 11)

[64] As Dorner explains Bauhaus was an attraction point for those who wanted to find a new way of life after "catastrophe of 1918" in contrast to those who were clung to the past. This explains that there was a strong motive for the first group because of their extreme fraction from the second in the so called "confused period of the Post-War Germany," as Dorner expresses, even for those from outside Germany in: A. Dorner, "The Background of the Bauhaus." *Bauhaus* (Boston: Charles T. Branford Company, 1952: 9)

architecture. As a design studio tutor with five years of experience[65], I can see that, in most of the cases even when the students appear to be very keen on their projects and design problems, their most sensitive concern is the grading of their tutors, not only for the beginning architecture students but also for the third or forth year students. This means that the most important motive of the students is still the high grades they get at the end of their design studio courses. This might be the consequence of the unconscious conversion of the unquestioned criteria for praise or criticism into rules of success in the design studios. In other words this might be the consequence of the tutors' habit of motivating or applying sanctions with grades rather than providing the proper circumstances for personal motivation of problem solving and self-development.

[65] Research assistance from 2003 to 2006 in the third year architectural design studio at Middle East Technical University (METU), Department of Architecture, and research assistance since 2006 for the first year basic design architectural design courses at Gazi University, Department of Architecture.

References:

Aytaç-Dural, Tuğyan. Theatre-Architecture-Education: Theatre As a Paradigm for Introductory Architectural Design Education. Ankara: METU Faculty of Architecture Press, 2002.

Denel, Bilgi. "Temel Tasarım Ve Değişim." Temel Tasarım/Temel Eğitim. Ed. Necdet Teymur and Tuğyan Aytaç-Dural. Ankara: METU Faculty of Architecture Press, 1998. 48-54.

---. Temel Tasarım Ve Yaratıcılık. Ankara: ODTÜ Mimarlık Fakültesi, 1981.

Dorner, Alexander. "The Background of the Bauhaus." Bauhaus. Ed. Herbert Bayer, Walter Gropius, and Ise Gropius. Boston: Charles T. Branford Company, 1952. 9-19.

Duffy, Francis. "Education in Architecture." Educating Architects. Ed. Martin Pearce and Maggie Toy. London: Academy Editions, 1995. 120-21.

Gropius, Walter. Scope of Total Architecture. Ed. Ruth Nanda Anshen. New York and Evanston: Harper & Row, Publishers, 1955.

Itten, Johannes. Design and Form: The Basic Course at the Bauhaus. New York: Reinhold Publishing Corporation, 1964.

Koberg, Don and Jim Bagnall. The Universal Traveler: A Soft Systems Guide to Creativity, Problem-Solving and the Process of Researching Goals. Menlo Park, CA: Crisp Publications, 2003.

Polanyi, Michael. "The Calling of Man." The Study of Man. Chicago: The University of Chicago Press, 1959.

---. "Knowing and Being." Knowing and Being: Essays by Michael Polanyi. Ed. Marjorie Grene. Chicago: The University of Chicago Press, 1969. ?

---. "Understanding Ourselves." The Study of Man. Chicago: The University of Chicago Press, 1959.

Torrance, E. P. Guiding Creative Talent. New Jersey: Prentice-Hall, Inc., 1962.