Conceptual Thinking in Design Studios: Upon Music and form Relation

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Abstract: In today's ever-changing and ever-growing world, new teaching and learning strategies are the focus of attention in order to develop creative thinking in design training. Previous applications of imaginative and formal methods are being evaluated to see their inadequacies, and new approaches are being discussed.

Both imagination and form- based approaches are employed to develop creative thinking. Whereas imagination based approaches develop students' creative thinking, form based ones let them have three dimensional thinking and develop their skills of form creation.

In this regard, abstraction- based design studies, which depend upon imagination and concept, are often used to develop students' form creation skills. Several abstract and concrete different disciplines are starting points in design studios, which enrich students' imagination and help them develop thinking skills.

Music was employed as a source of inspiration in form production using conceptual abstraction within this studio study which resulted from imaginative and formal interaction. In spring semester, 2014-2015 academic year, elective courses such as Creative Thinking and Seat Component, carried out by fellow teaching staff, appear in syllabus of Interior Architecture Department, KTU, and course content and outcomes of studio studies are to be scrutinized within this framework.

Keywords: Design training, creativity, creative thinking, form-based approaches, abstraction-based approaches.

1. INTRODUCTION

In today's ever-changing and ever-growing world, new teaching and learning strategies are the focus of attention in order to develop creative thinking in design training. Previous applications of imaginative and formal methods are being evaluated to see their inadequacies, and new approaches are being discussed to develop students' comprehension, interpretation, perception and way of thinking [1, 2, 3, 4]. While these new methods encourage students to think in an associative way, they also let them create ideas and new thinking forms [2, 5].

Imagination -based approaches such as creative drama and metaphor techniques, an informal education method, quality sorting method, mind map, association, six thinking hats and brainstorming techniques and also Scamper method, Harvey cards methods and conceptual map methods and so on, help designer candidates develop their creative thinking. These are idea –centered methods which focus on creativity in the process. The main purpose of intellectual method is to discover skills of creative personality. These models serve to discover creative products by creative persons. In this regard, Imagination -based approaches

aim at developing that feature of candidate designers [3, 6, 7, 8, 9].

Form-based approaches (Juan Gris and Malevich Tectonic Method, 9 Square Grid, Rule-based Formal Grammar, Evolutionary Design, Genetics Algorithms, Text Format Grammar, Analytic and Block Problem Methods) are models which focus on creating products and their development. Creative thinking's trans-formation into products arises at the end of a creative process. At the end of this dynamic process, design proposals establish a connection between form and content and provide a visual language by letting them turn into three dimensional design products. All these methods come up to produce an imaginative product at the syntheses stage of designing process. Formal models are used to produce satisfying functional forms that enable designer candidates to develop their productive skills in an unusual, original, innovative and flexible ways in two and three dimensional compositions [3,9].

Both form-based and imagination-based approaches underline the three dimensional thinking. They develop relation between perception and thinking by using philosophical development and intellectual imagination that change according to the designer's point of view. Conceptual, functional and formal abstraction are main points of these transformation issues. Abstraction is used to develop and enrich

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students' instinct and make them look around through a new approach.

Abstraction is an auxiliary tool for students to be able to make an extension in their creative designing process of abstraction by promoting their skills in innovative and original applications [10, 11]. Abstraction-based conceptual studies are tasks that stimulate students' creativity and imaginativeness. Furthermore, studies of abstraction lead to different aspects of a problem-solving through flexible and original thinking. In this study, as a source of inspiration music is used so that students can produce forms.

2. PURPOSE AND SCOPE OF STUDIO WORK

Courses such as Creative Thinking and Seat Component take place in the syllabus in Department of Interior Architecture, KTU in 2014–2015 academic year, and the main purpose of this studio work carried out by fellow teaching staff is to help students think

three dimensional way and develop their ability of creating forms. Music is employed as a source of inspiration to let them make intellectual and thinking extension and produce forms through conceptual and formal abstraction. This work, on the one hand, bases upon creative thinking and imagination-based approach focusing on process, and form-based approach which questions the product and its development on the other hand. This study of fiction, at first, bases on abstracting from the concrete, and then on producing forms in an abstractive way. (Figure **1**)

In accordance with this purpose and scope, the study is built on four basic steps:

2.1. First Stage of the Work

First stage of the work is gathering information and preparation to constitute institutional basis. Basic purpose of this stage for students is to gain institutional knowledge on interaction between architecture and
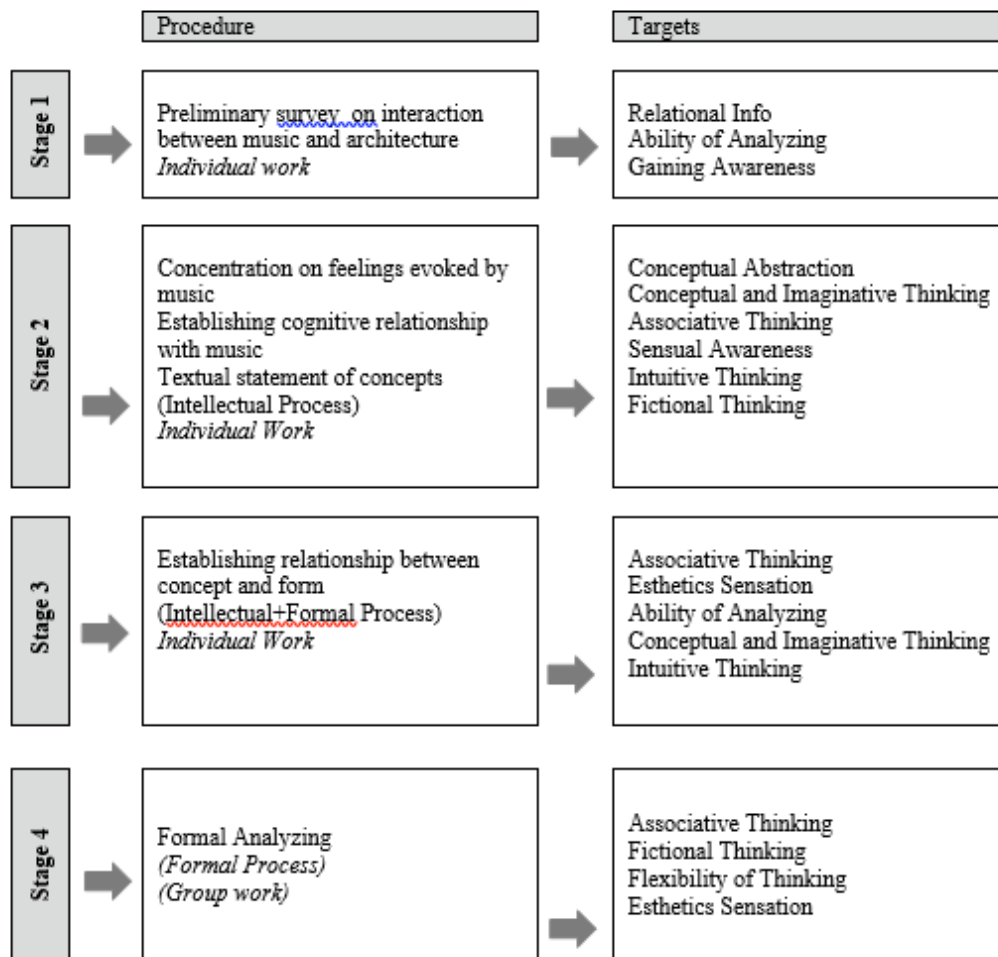

Figure 1: Studio Process and Targets.

Table 1:   Reflections of Concepts (Group 1-2)

Group 1			
Concept: Mystery			
Concrete	Abstract		
Black	Spreading		
White	Loss		
Rhythm	Loneliness		
Water			
Getting Dark			
Being Crushed			
Odor			
Group 2			
Concept: Contrast			
Concrete	Abstract		
Glacier	Misery		
Desert	Pain		
Layer	Despair		
Wind			
Cry			
Ice			
Death			

music. Students are requested to make a presentation of their researches in accordance with the purpose.

2.2. Second Stage of the Work

Second stage of the work is the process of imagination-based conceptual abstraction. At this stage, students are made to listen to a wordless music piece and then they are requested to focus on what they feel, to associate music with a concept and finally to write down that conceptual association. Conceptual analyses are carried out on students' written statements to find out their usage of abstract and concrete concepts. The purpose at this stage is to provide students with ability of fiction upon establishing a relationship between music and concepts, i.e. abstraction and concrete [Table **1-4**].

2.3. Third Stage of the Work

Third stage of the work covers a process in which concepts composed of intellectual basis are formally transferred into a three dimensional size. In this process, in the scope of elective course 'Creative Thinking', the 14 students are requested to design a surface associated with the concepts they chose; the other 14 students are requested to design a seat component associated with the concepts they chose in

the scope of elective course 'Seat Component'. The purpose at this stage is to make them gain skills at establishing relationship between concept and form and also help them state their design studies in a three dimensional way [Table **1-4**].

2.4. Last Stage of the Work

Last stage of the work is a form –based process in which a relation exists between form and content. In this stage studios belonging to two courses are combined to compose a common studio. Students from
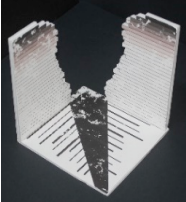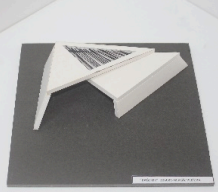
Table 2:   Reflections of Concepts (Group 3-4-5)
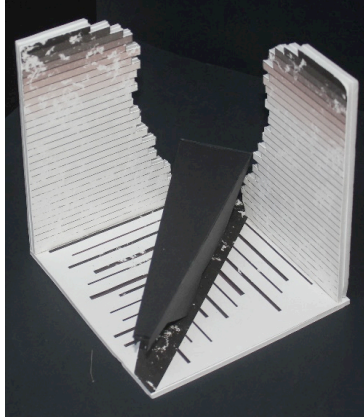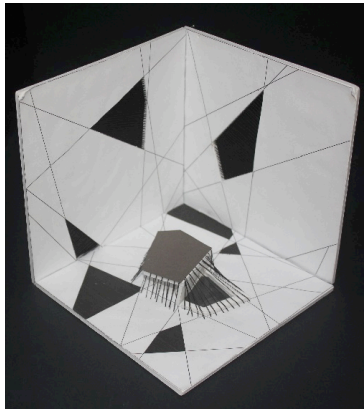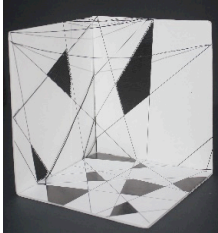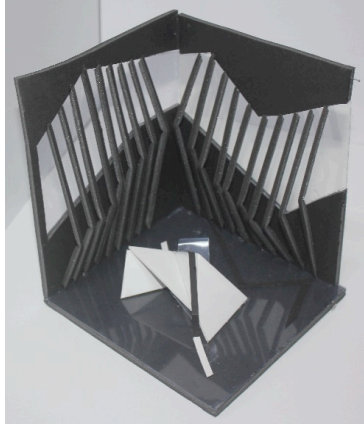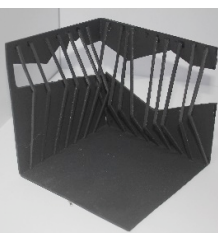
Group 3		
Concept: Separation		
Concrete	Abstract	
War	Pain	
Mourning	Ill-Tempered	
Decay	Sadness	
Wound	Missing	

Group 4		
Concept: Desperation		
Concrete	Abstract	
Cry	Attach	
War	Prisoner	
Scream	Permeable	
	Sorrow	
	Conscience	

Group 5		
Concept: Captivity		
Concrete	Abstract	
Darkness	Gloom	
Woman	Flutter	
Flutter	Sadness	
Rhythm	Despair	
Water		
Soil		
Imprisonment		
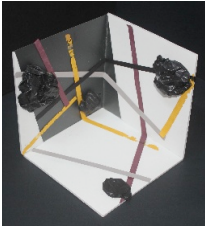
Table 3:   Reflections of Concepts (Group 6-7-8)

Group 6				
Concept: Annihilation				
Concrete	Abstract			
Mass	Transformation			
Sharp	Time			
Whispering	Fear			
Ice	Hurt			
Fire				
Hard				
Group 7				
Concept: Space				
Concrete	Abstract			
Universe	Absence			
Period	Nothingness			
Human	Soul			
Black	End			
Hole	Balance			
	Dimension			
	Dream			
Group 8				
Concept: Mystic				
Concrete	Abstract			
Mention	Desolation			
Copper	Desire			
Fire	Fear			
Rite	Hypnosis			
Slave				
Knot				

both elective courses are divided into two-person groups. As a result, surfaces and seat components designed by students from different courses are formally synthesized in a common studio. The purpose at this stage of work is to help them gain associative, fictional and flexible thinking skills [Table **1-4**].

Table 4:   Reflections of Concepts (Group 9)

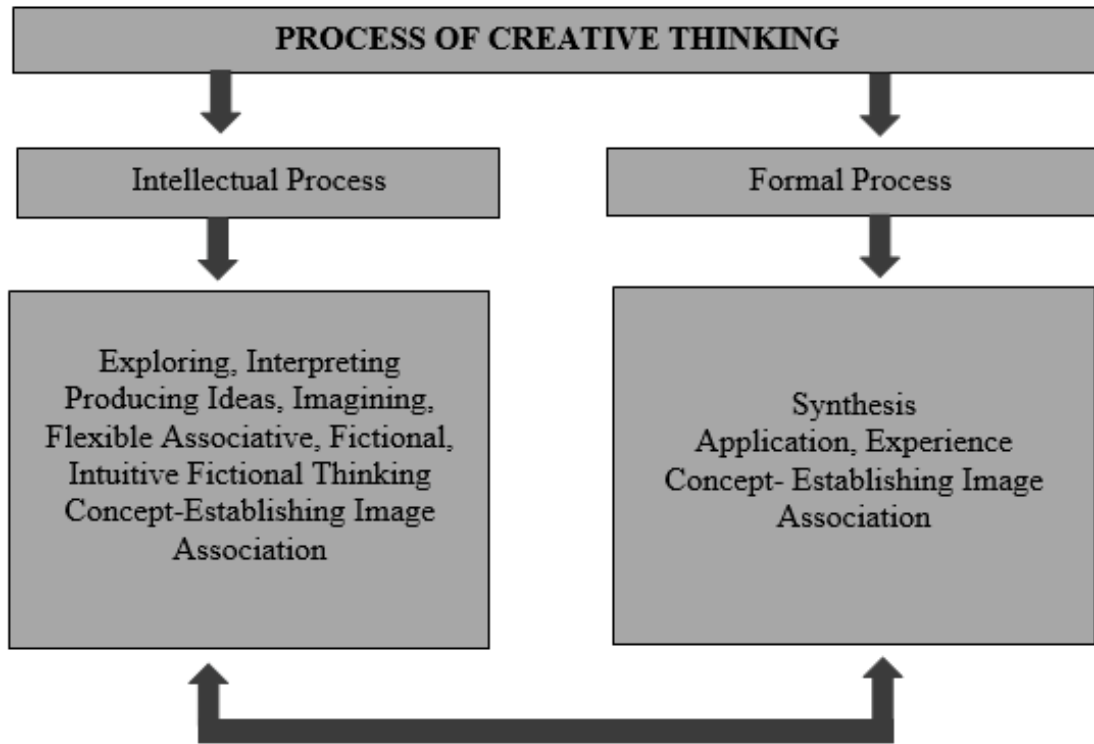| Group 9		
Concept: Fear		
Concrete	Abstract	
Blood	Pain	
Odor	Hate	
Stone	Helpless	
Road		

Figure 2: Relation between imagination and form-based approaches.

3. RESULT AND EVALUATON

The main purpose of the design training of students is to develop their creative thinking by revealing their potential. Creative thinking is a fact that covers man's whole intellectual and affective skills. Creative thinking, flexible, intuitive, fictional and three-dimensional thinking skills are under development in this process. Moreover, these methods play a part at enriching visual memory and at increasing skills of visual interaction. Methods used in design studios are constantly being renewed, so students gain skills at thinking in two or three dimensional way [Figure **2**].

Students are requested to do preliminary survey about interaction between music and architecture. The fact that students carry out preliminary survey upon interaction between music and architecture make them gain skills at establishing relationship among different disciplines, so students gain awareness in this process of knowledge acquisition. Students thinking skills are improved by having them listen to music and then state how they feel. This experience environment is a sort of platform in which they develop empathy with the composer by focusing on how they feel. This process also lets them express themselves emotionally.

In the process of form creation, students do research upon the relation between conceptual abstraction studies and concept- imagination-form. Association process is a stage at which awareness is internalized and evaluated. When they realize the interaction between music and architecture, they conclude that different disciplines can be sources of inspiration. Relationship established at this stage with the abstract and concrete concepts reflect on materials and structure.

The process is an experience environment in which outcomes of two different courses are associated with each other, and so students realize that designing is one complete operation. This process also allows them create original and innovative designing.

It is clear that the relation established between music and design has positive effects over two and three dimensional thinking. Therefore, this study suggest that establishing this kind of relation among similar art fields will be beneficial to students in designing in studios.

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