

THE CONTRIBUTION OF SCULPTURE COURSES IN DRAWING METHODS TO THE PERCEPTION OF THREE-DIMENSIONAL (3D) OBJECTS AND TO THE PROCESS OF APPLYING THE OBJECTS ON TWO-DIMENSIONAL (2D) SURFACES

Skulptūras studiju kursa ieguldījums trīsdimensiju (3D) objektu un procesu zīmēšanas metodes uztverē, piemērojot objektus divdimensiju (2D) virsmām

Ramazans Tilki (*Ramazan Tilki*)

Ondokuzas Majis Universitāte / Ondokuz Mayıs University
e-mail: rmzntilki@yahoo.com

Ozlema Ajvaza Tunča (*Özlem Ayvaz Tunç*)

Ondokuzas Majis Universitāte / Ondokuz Mayıs University
e-mail: ayvazozlem@gmail.com

Abstract. *It is established that drawing courses have an important place in the ateliers in the Department of Painting in Fine Arts Education, and that drawing is taught with different methods. The reason why great importance is attached to the ways drawing is handled is because it provides a basis for the departments that constitute plastic arts. The instruction of drawing in terms of its purpose, principles, in other words how it can be taught, reveals the problem of method in drawing instruction. Although it is quite difficult to solve this problem due to the features of this field, the solution to this problem can be achieved by identifying the visual elements of a design, an object or a subject, determining certain specific methods and applying these methods on students. The methods and the techniques applied during the drawing process and the identification of visual elements are determining factors in achieving the expected results. The aim of the sculpture and elective sculpture courses is to enable students to make connections between the surfaces that make up a whole by developing their ability to comprehend 3D forms. Sculpture Design courses, which are mainly based on modelling with clay, deal with making of busts, reliefs and figures. Sculpture courses aim to provide opportunities for students to make their own designs and enable them to reach to a level where they can perform their designed works by supporting them with plaster, polyester, cast, metal, stone, workshops where they can work with various materials. Consequently, by using a living model, any student who takes sculpture courses can identify:*

- *the analysis of organic and geometrical forms of human body;*
- *surface and form composition;*
- *geometric and organic composition;*
- *the differences on a person's face in terms of age, gender, and character.*

In drawings that are aimed at the use 3D geometrical objects, the use and identification of surfaces, the drawing or painting area or the objects that falls into the painting area are an important part of the process as well as the relationship between the objects themselves and their area. In this regard, the partition of drawing area according to the purpose, designing and planning the placing of the surfaces that make up the anatomical features of the 3D object show the importance of the sculpture and elective sculpture courses.

This study aims to offer a new perspective to the needs of drawing courses and contribute to the drawing courses conducted in related departments. It is assumed that this study will gain importance since it will provide new insight for the students and the instructor.

Keywords: *Drawing courses, perception of form, drawing methods.*

Introduction

According to the drawing course content sent to Faculty of Education by YÖK (Board of Higher Education in Turkey) for 2016-2017 academic year; drawing course is a course that aims to improve visual perception based upon elements and principles such as composition through

observation of living models or objects, ratio and proportion, light and shade, motion, integrity and balance by using various materials and techniques to create linear forms. In Sculpture (2.4 credits) or Elective Art Sculpture (2.2 credits) courses given during 2nd semester, one can analyze organic and geometric forms on a human face by using a living model through the evaluation of surface and form composition, geometric and organic composition and surface-form relationships. Besides, by creating a 3D human body relief by using a living model, they can apply human anatomy, geometric and organic structure of a human body through the analysis of surface and form. To accomplish the objectives in drawing education, the courses that in parallel with the drawing course, as well as the methods and techniques applied in the courses are essential factors. The description of the visual elements of a design, an object or a subject can be achieved by implementing particular disciplines and applying the defined methods on the students. The issue of how drawing should be taught reveals the problem of method in drawing instruction.

In this study, the fact that Art Sculpture and Elective Art Sculpture courses are not provided in the same semester with drawing course and are not compulsory as an undergraduate course is regarded as a problem. The importance of the courses has been examined and assessed. It is observed that the absence of Sculpture and Elective Art Sculpture courses has a negative impact on undergraduate students who receive art education and this study aims to offer solutions to this issue.

Conceptual framework Art Education

Art education is an attempt to educate and raise awareness for art and culture between individuals. It aims to be able to perceive beauty, know and express oneself and make aesthetic judgment. Therefore, it can be said that the purpose of art education is not to raise artists but to guide students to explore and create to meet their informational, cognitive, emotional and sensory needs. During this process, the ability to perceive, think, create, interpret, express and make judgments is acquired through the language of arts. The students can have the best way of expression for themselves among many art forms such as painting, music, theatre, dance, poetry, sculpture, photography, drama, movies and video. (Karahmet, 2015).

Drawing Education

Drawing is an essential course for students who receive education through plastic arts in that it aims to help students work, create and develop their skills.

“Drawing is related to the coordination between hand, eyes and the brain. In other words, it is based on seeing, thinking and interpreting. Whatever the applied technique is, all visual arts are related to drawing. Even though the starting point is objective, it is the expression of feelings and thoughts. The aim of drawing education is to guide students to have conscious perception” (Mant, 2007: 18).

“Instructors use various methods and techniques in their lessons. It is necessary that they apply and prefer techniques and methods that are most appropriate” (Artut, 2004: 119). Drawing differs from other fields due to its distinctive methods for teaching. In teaching of drawing, the emphasis is on what, how and in what ways it can be taught. Although the order is similar to other fields, teaching of drawing must be more comprehensive.

Methods for Drawing Instruction

The connection between visual arts education and other disciplines was provided by J. Bruner in a conference in 1959 (Özsoy, 2003). Today’s contemporary art education tends to encourage students think creatively, analyze, and discover new concepts and styles. To do this, it provides students with necessary information that will support them throughout the process. To

illustrate: observation in nature, review of art works. The main principles of the method is to provide that the individuals gain their own “intuition”, “opinion”, “understanding” or “personality” from arts. It is necessary to encourage students to create without losing the essence for a better expression while benefiting from the fact that drawing can be taught. What is meant by this is the pleasure that students will get from drawing and the correct method that students will develop. Regarding the concept of method in the drawing courses, another issue is how new behavior emerge in students. The aims of drawing can be achieved by selecting an appropriate method. Therefore, there is no single method for the drawing courses, but various different methods are used. Based on the findings in the present study, the role of 3D objects along with the methods and techniques used in drawing courses have been investigated.

While drawing a figure, in order to determine the proportions, geometric forming is necessary. Especially in drawings with living models, a kind of triangulation point and geometry is necessary in order to determine the changing dimensions due to optical image. Triangulation point will be an important tool in that it will help analyze the pattern to determine the rate of ideal figure and object patterns (Fig. 1). It is aimed that possible problems during application process are eliminated by determining the anatomical features for students who are currently studying Art and Crafts Teacher Education.



Figure 1. Examples of Triangulation Point.

The view of Astin, David, after a series of studies that he did on drawing, “All living creatures have unique geometrical forms”, supports our arguments. The picture below (Fig. 2) is an example.

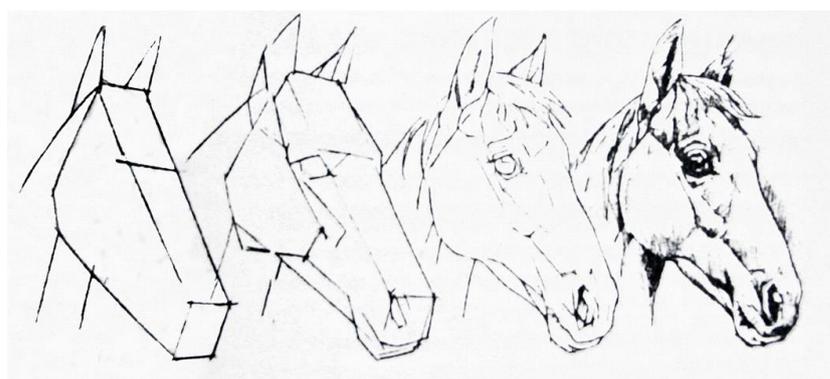


Figure 2. An Example of Geometrical Form.

Sculpture Course Education and the Contributions of the Course

Sculpture courses, which are mainly based on modeling with clay, deal with making busts, reliefs and figures. Students, in their final year, present a final project and a modeling piece. Sculpture courses aim is to make students create their own designs and enable them to reach new level where they can perform their designed works by supporting them with materials such as plaster, polyester and cast, metal, stone and wood.

The benefits of taking a Sculpture course for students are listed below.

Firstly, a student who can analyze the geometric and organic forms on a human face by using a living model will be able to:

- Detect the geometric and organic forms of a human face (head).
- Determine the composition of surface and form on a human face (head).
- Apply his/her work by evaluating the geometric and organic forms and the composition of surface and form.

Secondly, students will be able to create a 3D work by using a living model:

- Students will recognize the anatomical structure of a human face.
- Students will recognize faces with differences in gender, age and character.
- Students will determine the differences on a human face in terms of age, gender and character.

Thirdly, students will improve their ability to apply their work by interpreting a human face:

- Students will improve their ability to interpret human face.
- Students will abstract a human face.
- Students will style a human face.

Fourthly, students will be able to create a 3D work of a human body by using a living model:

- Students will recognize the anatomical substructure of a human body.
- Students will recognize the geometric and organic forms on human body.
- Students will determine the composition of surface and for.
- Students will apply their work by evaluating the geometric and organic forms and the composition of surface and form.
- Students will be able to comprehend the reasons behind the differences in shade, surface-form composition.

All these studies will demonstrate that geometry of 3D forms is an inevitable tool for students to capture the form. Later on, geometric and symbolic forums will be consulted for the formation of a simple space. For the application of scientific perspective that establishes the image of a 3D space, there will be also a need for a system with geometric drawing. During drawing education process, it is required to look for connections between the objects and the forms such as ellipse, triangle, circle, or cube. It is also necessary that students who are receiving instruction in drawing are equipped with skills to relate objects to those forms. This skill, which is expected to be developed in students, can be gained by tasks such as finding out how the human head, torso or limbs are simplified or which geometric forms the figure is similar to.



Figure 3. Transforming of forms to geometric structure.

By analyzing geometric forms, potential problems regarding the reproduction of the objects and their relationships can be eliminated and better results could be achieved. “The studies on the onset of perception establish that visual perception is a gradual progress.” (Genç, 1990: 27) “Humans only pay attention to some stimuli out of thousands. Other stimuli only form the background” (Atalayer, 1994: 44). So, attention is an essential factor in perception. **Attention:** Visual focal point and the distinction between boundaries and place. **Focal point:** Formal area where the initial looks are focused. **Boundary area:** The environment regarding the clear formal area. It is perceived ambiguously (Atalayer, 1994: 45).

Students should be able to see the perspective of objects in order to demonstrate the drawings of objects that have length-width and depth on a drawing paper. Accordingly, this emphasizes the importance of Elective Art Sculpture courses help students with the perspective

structures of the objects. It can be observed by analyzing the anatomic structure that a bust relief is made up of geometrical surfaces in triangular, equilateral, square, and rectangular when analyzed. “Surfaces always make the definition of 3D objects and are limited by lines. In this limitation, certainty and clarity are close to corners and places near the corners. Forms whose boundaries are exact, geometric characters are intact, and tone value are regular are perceived easily” (Atalayer, 1994: 47). “Forms may vary both in terms of essence and geometry. Regulating these differences within the framework to the rules provides certainty.” (Atalayer, 1994: 47). With such system, a structure of a geometric pattern that is suitable to the anatomical structure can be created. Three dimensionality of the body limbs indicates a possibility for creating volume. „For perception that works with creative intelligence, form-surface perception is required for sensory images to be equipped with a meaningful content” (Atalayer, 1994: 40).

In general, when beginning to work on a bust through a model, how a pile of clay will be taken, how the surface will be organized, and how the constituent elements will be built need to be determined. Following this, the connection between the parts that constitute the whole is observed with the help of the surfaces caused by the geometric forms. Then finally, the distance, space, anterior-posterior, horizontal and vertical etc. relationship of the constituent parts is obtained. It is observed that with this method, accurate drawing of human anatomy, which is considered to be very complex, can be achieved.

Method

Research Design: This study utilizes living models used in Sculpture courses and 3D objects used in drawing courses by students in Department of Art and Crafts Teacher Education in Faculty of Fine Arts in Turkey. The objects used by the students in Department of Painting in Fine Arts Education in Faculty of Fine Arts in Turkey were taken into consideration. Living models, cylinder, rectangle, cube, tors, bust, relief, triangular prism, oval objects constitute the samples.

Types of Sampling: The data were collected from 60 students who study Art and Crafts Teacher Education at Faculty of Fine Arts at 19 Mayıs University and take Sculpture and Elective Sculpture courses in their second, third, and fourth year of education.

Data Collection Tools: The data were collected through reviewing literature and observations. Turkish and non-Turkish books, online articles and related theses were reviewed to obtain necessary information.

Analysis of Data: The results were obtained according to the way 3D objects are interpreted, use of living models in drawing courses, views of instructors on the use of models in Sculpture courses and the ways models are analysed, and finally the analysis of drawings done by the students after the relief, bust and figure works are finished.

Findings:

The works of students before and after the Sculpture course:

1th Student



Before



After

2th Student



Before



After

3th Student



Before



After

4th Student



Before



After



Sculpture Course-Living Model Relief Practice



Living Model Relief Practice (details)

Results and Discussion

The data were collected through the drawing works of the students who study Art and Crafts Teacher Education at the Faculty of Fine Arts. The students took 8 hours of drawing course in total during first and second semester. The findings of the study suggested that:

- In terms of comprehending and recognizing 3D objects, 3D objects used in ateliers for drawing lessons that help improve their skills. Also, when the eyes are trained, drawing can be done easily by means of exploring the geometric forms.
- The reason why 3D objects are used for drawing instruction is because they help the depth, size and the relation between the forms. Thus, it helps guide the students who take the course to perceive direct or indirect relations with each other in accordance with their appearance.
- The equipment used for drawing courses in the ateliers and the works of the models taught in Sculpture course ensure that students comprehend the structural characteristics between the forms, the effect of the mass of the formats with each other, the effect of the variations in the third dimension and their motion among themselves.
- The reason why drawing classes are important is because the course introduces the basic structure of plastic arts. The transfer of 3D objects into drawing with its anatomical features is the basis of drawing. This study concluded that teaching of 3D objects should be a priority.
- 3D objects that were used for Sculpture courses in ateliers were taught by using concepts such as line, tone, value, which are often used in plastic arts.
- While approaching anatomy in drawing courses, 3D objects should be seen not only as a tool for drawing but also as a way to see and understand how different forms are related during the process of establishing a relationship between objects, generating and developing ideas, to understanding the anatomical structure.

Kopsavilkums. *Zīmēšanas studiju kursiem ir nozīmīga vieta tēlotājmākslas izglītībā. Zīmēšana tiek mācīta ar dažādām metodēm. Liela uzmanība tiek pievērsta tam, kā zīmējums tiek apstrādāts, jo tas nodrošina plastiskās mākslas pamatu. Izvirzītais problēmjasūtājums ir, kā pasniegt zīmēšanas kursu, izvirzot attiecīgos mērķus un paņēmienus. Problēmas risinājumu var rast, nosakot dizaina, objekta vai subjekta vizuālos elementus un piemērojot attiecīgo metodes. Izvēlētais metodes un tehniskie paņēmieni zīmēšanas procesā un vizuālo elementu identifikācijā ir*

noteicošie faktori, lai sasniegtu gaidītos rezultātus. Skulptūru un tēlniecības kursu mērķis ir dot iespēju studentiem veidot sakarības starp virsmām, kas veido veselumu un vienlaicīgi attīstot spēju izprast 3D formas. Skulptūras dizaina kursi, kas galvenokārt balstās uz modelēšanu ar mālu, māca veidot krūšutēlus, kontrastus un figūras. Skulptūru studiju kursa mērķis ir nodrošināt studentiem iespēju radīt pašiem savu dizainu un dot iespēju sasniegt tādu līmeni, kad viņi spēj prezentēt savus darbus, izmantojot dažādus materiālus: ģipsi, poliesteri, čugunu, metālu, akmeni. Tādējādi, izmantojot dzīvu modeli, students, kurš izvēlas tēlniecības kursus, spēj uztvert un analizēt: cilvēka ķermeņa dabisko un ģeometrisko formu, virsmas un formas kompozīciju; ģeometrisko un dabisko kompozīciju; atšķirības cilvēka sejā atkarībā no vecuma, dzimuma un rakstura. 3D ģeometrisko objektu rasējumi, kā arī attiecības starp objektiem un to jomu, ir nozīmīga tēlniecības procesa daļa. Šī pētījuma mērķis ir piedāvāt jaunu perspektīvu zīmēšanas kursu studijās un veicināt zīmēšanas kursu integrāciju saistītajās jomās. Iespējams šis pētījums iegūs nozīmi, jo tas piedāvā inovatīvu skatījumu gan pasniedzējiem, gan arī studentiem.

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