Evaluation of sculpture education programs in the light of technological developments

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Abstract

Technological developments influence the educational fields as well as all areas of life, play an important role in giving direction to the flow of the education. In general, this radical innovations in technology affects education/art education, in particular they affect the understanding of traditional material and application methods in sculpture education. The opportunities offered by the computer technologies as well as electric and pneumatic tools which replace traditional instruments to the field of sculpture deepen the gap between contemporary methods and traditional education methods. While traditional method and techniques are used in sculpture education on the one hand, on the other hand a workshop hardware that is compatible with today's technology and an education program developed in line with that hardware are needed. How much the institutions giving statue education renew their educational programs with the developing technology and how they response to these developments are seen as a problem. This paradoxical situation is not only sculptors' problem but it is also a problem/question for the institutions and academic staffs giving sculpture education. The purpose of this study is to determine the effect of the usage of technology in sculpture education era on the education, to contribute by proposing what kind of preparation should be carried out in terms of having the students earn the technology usage in educational curriculum.

Keywords: technology, education program, evaluation

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1. Introduction

Technological developments today necessitate the use of modern technological tools and methods as well as classical approach ongoing in art education. Technological development term is a term susceptible to change based on the concept and time (Acar Sey, 2006). Undoubtedly, art fields cannot be exempt from "siege" of the technology covering all areas of life over time. As in all life areas, for the art fields to be in this "siege" of the technology is a question/problem area that needs to be discussed independently from the value. Arapoglu, (2008) with the statement that since the art is societal, it is open to popular discussions and it is extremely natural draws attention that the art is a debated area. Therefore, exploring the art and technology relationship, the opinions related to how people who are interested in art education and deal with the field of art are expteremly important.

In fact, in this regard, while Tepecik et al. (2005) use the expressions that technological developments provide eases and different approaches in artistic applications and neither the technology can be isolate from art nor the art can be isolated from the technology, Ak reported that by paying attention to studio works and classes like computer technologies, patterns, basic design, computer design, illustration, digital illustration, digital design, portfolio design, typography, multimedia and so on, many successful digital artist can be trained. About the subject, Saglamtimur (2010) draws attention to the relationship between art and technology with an expression that an artist starts to produce an art which is not possible to produce with other tools or techniques by using computer technology, in this case, the meaning of the true, content, location has changed almost entirely. When both the opinions of technology usage and the unity of curriculum are examined, the main reason of these opinions is seen to be the modernization of art. In fact, Balamir (1999) claims that the purpose of the curriculum programs is to interpret the age and train modern people but today's program is far from that and art education classes also get their share.

When the subjects related to technology usage in the art field, revision and arrangement of curriculum are discussed, it should be noted that technology usage is not new. Technology is not only meant the usage of technologies like only computer but it is meant to use tools and hardwares that are specific to the age in that area and to have adequate hardware for the educational environment. According to Kirisoglu (1991); Visual Art Education is an education directly related with tools and instruments. Teaching state depends on this environment. Workplace, course tools and instruments directly affect the art education. In this context, even though technology usage in art seems to be new, it is known that each age uses its own technology in itself and innovative and more practical tools than previous ages are used. Still, in which ratio this kind of technologies will be used in sculpture education, whether the artist's creative ability would be affected/ unaffected from this stand as a question/problem.

While traditional method and techniques are used in Sculpture education on one side, on the other hand, workshop hardware that is compatible with the technology of the age, responding the requirements of the age an educational program developed in line with this hardware are needed. When today's technologies are considered, how much the institutions giving sculpture education renew their educational programs against the developing technology and how they meet these developments are seen as a problem. Insufficient technical equipment and instructors, failing to establish a unity in program contents, not having a common curriculum for the educators, formation of programs depending on the students' level of readiness and technological developments, master-apprentice relationship become the main problems standing in front of us. Elmas (2011) stated that; "even though an educational understanding based on master-apprentice relationship in the workshop which has come to 1970s at the Academy and other faculties tried to be abandoned gradually after 1970s, this tradition is continued by many educators today" and draws attention to the negativity of the current situation. Although a restructuring is made during the Republican period, this structuring led to disruptions in itself as well as failure to achieve national unity in education, led the continuation of the problems in the fields like program, technical equipment, physical conditions today. Although Turkish sculpture educators who grow after the 1960s tried to close this gap by achieving a long way in a short time, some negativities are still seen in education programs.

Nevertheless, even though this education is wanted to be continuing according to a certain program in sculpture education, reaching to universal norms is still a problem. When the main causes of this problem is ranked: Sculpture education started late comparing with the other art branches. Occurance of the social provisions of making "sculpture" prohibited object similar to the state policy, not enough investment on sculpture field in parallel to these, art education managers avoiding sculpture education against social reflexes can be shown as examples. Sculpture art in this context continues to be at the center of the art problems that have been discussing. Deficiensies in meeting the basic needs in this field requires re-examination of the sculpture education programs.

When the method, program and physical background followed today in sculpture education are investigated, important problems reflected to the educational process can be seen. Firstly, deficiencies are seen in the program differences, physical conditions, government investments, technological equipment and in the technology usage information. San (1998) said that students must gain skills and information to use intellectual methods, techniques, materials and tools related to this field in order to connect with the creativity period and products in basic level Tools – equipments and using technology skills and education environment hardwares must be revised in Sculpture education.

In this context, the opportunities offered by technology in sculpture education field and based on that, the questions directed to 12 academician in 6 universities in face to face interviews made for determining the changes made in class programs are;

1. Are there any technology classes based on material and instrument information supporting the class before the sculpture education in Fine Arts Faculties having Sculpture department?

2. What is your opinion about technology usage in Sculpture education?

3. What are you thinking about the possible results in future by the widespread use of technology in Sculpture education?

The following results were obtained about the research subject by evaluating the answers to the question via qualitative research methods.

In semi-structured interview tool, open-ended question related to what is included in sculpture education curricula, which classes should be before these classes in the curriculum, what are their opinions about the usage of today's technology in Sculpture education and the possible outcomes in future by using technology are included. By decoding the voice records given by the participants to the semi-structured interview questions, they were converted into written text. Content analysis techniques are used to analyse these written texts. When content analysis was performed, records that were converted into the texts are categorized depending on the root theme of each question. Creating a category is a stage creating a general result from the special data (Ely, Anzul, Friedman, Garner and Steinmetz, 1998). When coding is made in this study, in addition to the predetermined data, concepts arising during the coding were also considered. Then categories explaining the codes in general level (themese) were determined and results were reviewed. In other words, this study was performed by using qualitative and quantitative methods together. This method aims to examine the subject in more detail in order to overcome some of the limitations of the informations produced by quantitative method. One of the main reasons why this method is selected in this study is that it is a method for understanding the context and data collection tolls give the flexibility (Top, 2007). In the researches performed with qualitative methods, data collection tools like observation, interviews and document analysis are used. In these studies, examining systematically the meanings arising from the experience of the people planned to be work on the research or worked with (Ekiz, 2003). Because of the reasons like providing sensitivity to this natural environment, participant role of the researchers, having a holistic approach, revealing the perceptions, having flexibility in the study pattern and having an inductive analysis (Yıldırım & Simsek, 2000) are preferred more in social sciences in recent years. Briefly, qualitative

researches provide sensitivity to social context where the research is produced (Kus, 2003), description and interpretation of the subject are given importance (Mayring, 2000).

Content analysis is defined as a "research method applying some processes to conclude some results from a certain text" (Weber, 1988: 9 akt. Bulut ve Üçinkülüğ 2007) and used in the analyzing the data collected with qualitative methods as a research technique related to objective, systematic and quantitative identification (Gökce, 2006). In the light of all these data, the data obtained from the performed interviews are given below.

Table 1. Opinion table related if the instructors benefited from the technology in their education process or not.

Participant	Age	Academy degree	Service Year	Enough/ Used	Not enough/ Not used	There was insufficiency/ used a little
A	Over 50	Prof.	Over 30		Not enough	-
B	Over 40	Lecturer	Over 20		Not enough	-
C	Over 30	Research Assistant	0-10 yıl	Used	-	-
D	Over 40	Assoc. Prof.	Over 10	Used.		-
E	Over 40	Assoc. Prof.	Over 10	Used		- there were insufficiencies
F	Over 40	Assist. Prof.	Over 20		Not enough	-
G	Over 50	Prof.	Over 30		Not enough	-
H	Over 30	Research Assistant	0-10 years	Used		-
I	Over 50	Expert	Over 30		Not enough	-
K	Over 50	Prof.	Over 30		Not enough	

As it can be seen from the table, while 40% stating that they used the technology in an adequate level according to today's conditions and the possibilities offered, 60% of them respond that technology is not used in enough level in education process. When the socio-demographic characteristics of the respondents composing 60% of the participants are compared with 40% of the group, it is revealed that people who have higher age and service years do not use technology enough.

Table 2. Opinion about the usage of Technology in sculpture education today

Participant	Age	Academy degree	Service Year	Technology/Computer/ Pneumatic/Electric Concepts frequency	Percentiles
A	Over 50	Prof.	Over 30	6	% 15,8
B	Over 40	Lecturer	Over 20	2	% 5,3
C	Over 30	Assistant	0-10 years	1	% 2,6
D	Over 40	Assoc. Prof.	Over 10	3	% 7,9
E	Over 40	Assoc. Prof.	Over 10	7	% 18,4
F	Over 40	Assist. Prof.	Over 20	4	% 10,5
G	Over 50	Prof.	Over 30	3	% 7,9
H	Over 30	Assistant	0-10 years	4	% 10,5
I	Over 50	Expert	Over 30	5	% 13,2
K	Over 50	Prof.	Over 30	3	% 7,9

When the data obtained from the usage frequency of the concepts related to the technology usage are examined, not much disagreement among the participants are observed about the usage of the technology in stone sculpture education. When the table are examined, it can be seen that the technical concept usage frequency of a very important percentage of the participants (% 90) use these concept in a ratio changing in the frequency interval in %15,8 and % 7,9. In the lights of the findings, all faculty member support putting technology into the education process, but traditional stone sculpture education is seen to be right to be used parallel to the technology. How this parallelism will be can be thought to be performed maybe by an arrangement class curriculum.

Table 3. Opinion table related to the possible results of technology usage in sculpture education

Participant	Age	Academy degree	Service Year	Technology/Traditional/ Curriculum/ Result concept transition frequency	Usage frequency percentage
A	Over 50	Prof.	Over 30	7	19,4
B	Over 40	Lecturer	Over 20	0	0
C	Over 30	Assistant	0-10 years	2	5,6
D	Over 40	Assoc. Prof.	Over 10	5	13,9
E	Over 40	Assoc. Prof.	Over 10	6	16,6
F	Over 40	Assist. Prof.	Over 20	7	19,4
G	Over 50	Prof.	Over 30	0	
H	Over 30	Assistant	0-10 years	5	14,7
I	Over 50	Expert	Over 30	2	5,6
K	Over 50	Prof.	Over 30	1	2,8

Moving with the table about the widespread use of technology in sculpture education, whle 50% of the participants was defending that it is not going to affect the education and it may even be useful, but small concerns are observed. These concers are more dominant in the other participants. 90% of the participants have the opinions that the technology can be used depending on desing, technology is a facilitating factor when desing resulted by the artist and the new generation can use it more beneficial. In the study, in addition that there is no curriculum whose aim, limits and goals are determined regarding to sculpture education, it is also seen that the current curriculums have no common language. Regarding to this subject, by examining the programs of the universities which have sculpture department, it is obtained that there are big differences between course hours, program, curriculum of many universities and they do different applications. Hence, it can be said that construction of a new program having common denominators regarding to sculpture education in the current sculpture departments is required. Within the frame of the research, opinions, about plus and minus of the usage of technology in sculpture education and whether or not technology is used in sculpture education during design and production process, were resorted. As a result of this meeting, it is observed that almost 100% of the participants have the opininons positive in the way of using technology in sculpture education and remedy the problems. This states that the art educators are open to innovations. However, how this positive attitude reflected is examined, it was seen that not enough steps are taken about this subject and other than a few application, this subjet is not thought well within the frame of education and preparation and classes about this are not placed in the programs. One of the reasons of these is that the having these technologies and possessing them in the workshop technical equipment are costly. As a result, firstly curriculum issue should be taken into account; even though it is not identical in the sculpture education, works for creating some common programs should be started. Getting the instructors away

from the individual curriculum approaches in sculpture education, it is required to develop thoughts about creating a curriculum based on scientific basis in sculpture education without getting the individuality of the art into the center.

Panels, symposia and colloquia3 can be arranged that the teaching staff of the sculpture department will attend. As a result of these works, by taking the opinions about the curriculum, a curriculum meeting the students' needs, appropriate to the properties of the class and in which a common language is formed can be created.

Including a class based on wide perspective material information about the properties, risks and advantages of technology usage into the program will provide the students to start the classes with more knowledge. With such a technical class, the students will see the relationship between the traditional method and today's technology, in addition to improve establishing coordination skills, instructors' worries about that the traditional methods will be lost by time will be eliminated.

As a result of a research made about this subject, starting from searching answers to the questions of what kind of a technical class should be added? What should be the content? Will be beneficial and accurate for giving a technical class prior to stone sculpture education in terms of education.

No doubt, the developing technology will influence us even faster. Equipping the education environments with more modern and the technology of our age and preparing education programs parallel to these will serve for training more powerfull artist generation in future.

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