

The Influence of Active Learning Provided By Distance Education on Academic Achievement, Self-Efficacy And Attitudes in Art Education

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Abstract

This research was carried out to examine the effects of active learning methods, which take the information away from memorization and make it applicable in daily life, on the achievement, attitude and self-efficacy of the 'Contemporary Art Practices' course taken by the undergraduate students. In the study, single group pretest-posttest experimental design, which is one of the quantitative research approaches, was used. The research was carried out on 15 students studying at the 1st and 2nd Grades of İzmir Katip Çelebi University in the fall semester of 2019-2020 in Turkey on the pandemic process. Contemporary Art Practices course was conducted by using active learning methods 'brainstorming, demonstration, speech ring, story creation and Phillips 66'. In this study, 'Contemporary Art Practices Course Achievement Test', 'Attitude Scale' and 'Self-Efficacy Scale' developed by the researcher were used as data collection tools. In the study, it was examined whether the data obtained had a normal distribution. For this, Shapiro-Wilk test was used. Relationship sample t-test was used to compare the data obtained before and after active learning activities. Analyzes were made using statistical program. The results of the research are that active learning methods have a significant effect on the achievements, attitudes and self-efficacy of the 'Contemporary Art Practices' course that the undergraduate students take via distance education.

Keywords: Art Education, Active Learning, Distance Education, Pandemic Process

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Introduction

One of the ways that education, which aims to raise the person who can realize himself with great effort, to achieve this goal is art education. Art education is an activity that prepares conditions that will help people to reveal their creative powers and aims to gain personality (Buyurgan, Buyurgan, 2007: 22). The scope of this activity includes applied works, work of art review, criticism, art history, and aesthetics. These four basic disciplines, which constitute a versatile art education program, were developed by the Getty Fine Arts Education Center in the U.S. in the 1980s (Özsoy, 2003; 167). W. Dwaine Greer, who heads expert art educators at this center, has been designated as a Discipline-Based Art Education (quoted by Efland, Özsoy, 2003; 168). The purpose of this method, also known as Multi-Field Art Education, is to provide the student to synthesize the work of art properly, by adding the intellectual dimension to its stages such as producing, defining, interpreting, and analyzing it. In order for the Discipline-Based Art Education method to achieve the above-mentioned goal; art historical approaches, phases of art historical understanding, and ways of teaching and learning should be assimilated (Ayaydın et al., 2009; 74). Thanks to the art history that will give the student a lively and conscious history of art, the student will recognize, learn, and form a basis in creating new forms and choices (Kırıçoğlu 1991; 140).

There is a great need for art history lessons in increasing the level of aesthetic taste that is felt in our society. Different perspectives are known for developing new likes levels instead of ordinary stereotypes. It is known to reach an interpretation by thinking and analyzing the history of art and works of art of the past. This interpretation will affect our future work and even our daily life. Art history is taught for a better understanding of the artwork and its place in society. It improves students' ability to evaluate, understand, and tolerate opposing views (Kırıçoğlu & Stokrocki, 1997; 133). Since the content of art history lessons is intensive theoretical lessons, when processed with a teacher-centered teaching method, it may cause the information to be kept in short-term memory and to be forgotten after a while. This situation prevents the cognitive goal from passing to other stages such as comprehension, application, analysis, synthesis and evaluation, and permanent information flow. For this reason, creating learning environments that will enable students to use more than one sense organs, develop their abilities and creativity, provide permanent learning, will also be effective on supportive learning, and ensure their enjoyment while learning, is an important factor in increasing the quality of education.

Today, as a result of the developments in the field of information technology, the change takes place faster than ever. Information in a field is quickly out of date, and learning specialized information and processes is less important now (Sivan et al, 2000). For this reason, rather than memorizing pieces of information that are disconnected from each other, there is a need for individuals who can establish relationships between the information they acquire, analyze and derive

new information, and adapt the information they have structured in this way and use it effectively in their own life. Schools are now expected to provide students with the skills to analyze, synthesize, work productively in groups and develop appropriate attitudes by dealing with individual differences and learning styles, critical thinking, technical, social, economic, political, and scientific problems (Mills, 2006). Unfortunately, traditional education understanding cannot fulfill these expectations. To raise individuals who are suitable for the type of people required by the information age, who have high academic success, individuals who have the critical thinking, can make independent decisions, are open to learning, have strong communication skills, have problem-solving skills, are creative, empathetic and open to personal development (Riedler & Eryaman, 2016). The realization of this depends on the application of the teaching models in which the student is active.

Active Learning

Today's learning paradigm is inspired by the constructivist approach that advocates that learning is actively structured by the student (Birenbaum, 2003). Learning takes place only when students leave the passive listener position and become active participants (Hawtrej, 2007). This realization of learning is the basis of active learning. With active learning, thinking, processing, learning by doing and living takes place rather than just listening. This encourages students to be responsible for their learning (Greene, 2011; Michel at al. 2009; Quinlan & Fogel, 2014). There are various definitions of active learning in the literature. According to Shariff (2012), active learning; it means that students actively participate in class activities throughout the lesson, rather than passively following the teacher who teaches the lesson during the lesson. According to Greene (2011), it is based on first-hand experience and learning by living. According to Açıkgöz (2005), active learning is a process where the learner bears the responsibility of the learning process, the learner is allowed to make decisions and self-regulate about different aspects of the learning process, and complex teaching tasks are forced to use the mental abilities of the learner during learning. According to Dolan and Collins (2015), the teacher stops talking and students move towards a learning goal by actively doing something to work on a problem in a small group or answer a conceptual question. Inactive learning, the student takes decisions about learning and takes responsibility from the beginning to the end of the process (Saygı & Bilen, 2009). These decisions to be taken by the student are generally; It is listed as choosing the appropriate learning goals for itself, determining the activities and strategies to be used in reaching the learning goals, establishing a relationship between the acquired knowledge and pre-learning, applying what they learn, evaluating their performance and learning process (Yalın, 2015).

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be taken by the student are generally; It is listed as choosing the appropriate learning goals for itself, determining the activities and strategies to be used in reaching the learning goals, establishing a relationship between the acquired knowledge and pre-learning, applying what they learn, evaluating their performance and learning process (Yalın, 2015). It is possible to say that the most important reason for the active learning approach to be so popular is its contributions to the field of education, the benefits it provides to teachers and students. There are various researches in the literature that enable the adoption of active learning. Shieh et al. (2010) stated that student-centered approaches in active classrooms improve their academic achievement by keeping students away from passive learning habits as well as improving their competencies in learning methods. Köse and Küçüköğlü (2009) determined that the learning environment affects student success in the research results, where they determine the effect of active learning on the teacher candidates. Besides, various studies related to the learning environment reveal that students' emotions (eg lesson enjoyment, positive attitude), active participation, classroom interaction (teacher-student, student-student), collaborative student work and teacher attitudes affect learning positively (Artut & Bal, 2018; Kısakürek 1985; Küçüköğlü & Köse 2008; Okumuş at al, 2020; Wong 1993). Studies of Dağ at al. (2019) showed that a course and classroom environment designed according to the active learning model of undergraduate students have positive effects in terms of cognitive awareness, respectability, individual responsibility, cooperation, and active participation.

In this study, the effect of active learning approach, which is one of the most important subjects in Turkey and worldwide, and which is regarded as one of the most important elements of student-centered understanding, on the academic achievement, self-efficacy levels and self-efficacy levels of students in art education has been tried to be determined. It is thought that active learning will be effective to ensure permanent learning in distance education art education.

Problem Statement

What are the views of the research on the 'Contemporary Art Practices' course, which is taught using active learning methods via distance education? The sub-problems of the research are;

1-Does it has a significant effect on the academic achievements of undergraduate students regarding 'Contemporary Art Practices' course, which is carried out with active learning methods given by distance education?

2- Does the undergraduate students have a significant effect on their attitudes towards the 'Contemporary Art Practices' course, which is carried out with active learning methods given by distance education?

3-Does the undergraduate students have a significant effect on the self-efficacy of the ‘Contemporary Art Practices’ course, which is carried out with active learning methods given by distance education?

Material and Methods

This section includes a research model, subjects, walkthrough, data collection tools, and data analysis techniques.

Research Model

In this study, single group pre-test and post-test experimental design, which are among the quantitative research approaches, were used. One-group pretest-posttest experimental design is one of the weakest patterns among the experimental patterns. However, as Creswell (2012) stated, it is the nature of the research to prefer a single group experimental pattern in researches where a new training module is developed and implemented.

Research Group

The research group consists of 14 students, 11 females and, 3 males who are students of different faculties at İzmir Katip Çelebi University in the spring semester of the 2019-2020 academic year and take the Contemporary Art Practices course within the scope of the elective course.

Table 1. Information about students

Gender	f	%
Famale	11	79
Male	3	21
Total	14	100
Faculty/Department		
Faculty of Pharmacy	2	14
Faculty of Social Sciences and Humanities- Department of Media and Communication	6	42
Vocational School of Health Services / Department of Medical Services and Techniques	1	8
Faculty of Health Sciences / Nursing Department	2	14
Faculty of Health Sciences / Physiotherapy and Rehabilitation Department.	2	14
Faculty of Health Sciences - Department of Nutrition and Dietetics	1	8
Total	14	100
Class		
1st grades	9	65
2nd graders	5	35
3rd graders	-	-
4th graders	-	-
Total	14	100

Data Collection Tools In this study, the literature was scanned as data collection tools (Aydede & Matyar, 2009; Saygı & Bilen, 2009) and expert opinions were obtained and the researcher; Attitude Survey consisting of 30 items related to Modern Art Practice Course, Self-

Efficacy Perception Questionnaire for Art Lessons consisting of 19 items and Achievement Test of Contemporary Art Practices Course have been developed.

a. Attitude Questionnaire Regarding Contemporary Art Practices Course (AQRCAPC)

In the research, the Attitude Questionnaire for Contemporary Art Practices Lesson developed by the researcher was used to measure the attitudes of the subjects. In the questionnaire development study, firstly, a composition with the subject of “Your Thoughts and Expectations Regarding Modern Art Practices Course” was written to 40 students who took elective art classes at Izmir Katip Çelebi University be to the basis of the formation of their items.

Content analysis was applied to these compositions. Based on the expressions determining students' attitudes towards the course, their opinions were determined. In addition to these, a 43-item scale was created by using the related literature. The attitude scale prepared for the pretest was applied to 30 students studying in the same department. Analyzes of the pretest application were examined in the statistics program. During these examinations, item-total test correlations and factor load values were examined. When looking at item-total test correlations, item-total test correlations were found to be appropriate to exclude items lower than 0.35 from the questionnaire. For this reason, the Attitude Scale for the Introduction to Art History Course with 43 items decreased to 30 items. The Cronbach Alpha reliability coefficient of the Attitude Scale for the Introduction to Art History Course with 30 items was 0.83.

b. Self-Efficacy Perception Questionnaire for Art Classes (SEPQAC)

Do you feel successful in Art Classes for students studying at İzmir Katip Çelebi University to create survey items? What behaviors do you want to occur so that you can feel successful? the titled composition was printed. Content analysis was applied to these compositions. A 32-point Likert-type scale was created using the literature on the subject. The scale was examined by two field specialist faculty members, an art history specialist, and an education science specialist. As a result of the opinions of the experts, the number of items in the scale was reduced from 32 items to 28 items. In the validity and reliability study of the questionnaire, the item total test correlations and factor load values were examined. While looking at item-total test correlations, it was considered appropriate to eliminate items with item total test correlations less than 0.35. Therefore, the Self-Efficacy Perception Scale for Art Courses with 32 items decreased to 19 items. The Cronbach Alpha reliability coefficient of the Self-Efficacy Perception Scale for Art Courses with 19 items was found to be 0.89.

c. Contemporary Art Practice Course Achievement Test (CAPCAT)

After this stage, a preliminary trial study of the Contemporary Art Practices Course achievement test consisting of 42 items was made. The KR20 formula was applied to calculate the reliability of the Contemporary Art Practices Course Success Test pretest form. As a result of

applying this formula, 23 items whose item discrimination power is less than 0.19 have been removed from the test. According to Tekin (2004: 249), items with item discrimination power index 0.40 and above; very good substances, items between 0.30-0.39 are very good items, items with 0.20-0.29 are items that need to be corrected in general and finally items that are 0.19 and less are very weak items and if not developed, they should be removed in the test. As a result of these arrangements, the item analysis of the 19-item Contemporary Art Practice Course Success Test was performed and the reliability coefficient of the test was examined with the KR-20 formula. KR-20 reliability coefficient of the developed test with 19 questions was found to be 0.816. The average of the difficulty levels of the items is 0.483. This result shows that the test is a medium difficulty test. The achievement test was carried out using the zoom and moddle programs by considering the distance education process.

Data Analysis

In the study, it was examined whether the data obtained had a normal distribution. For this, Shapiro-Wilk test was used. A relationship sample t-test was used to compare the data obtained before and after active learning activities. Analyzes were made using the statistical programs.

Process Steps of the Research

- In connection with the subject of the research; The attitude Scale of Contemporary Art Practices Course, Self-Efficacy Perception Scale of Art Courses, and Achievement Test of Contemporary Art Practices Course have been developed.
- The application process has been determined as 5 weeks. In the 5th week of the spring semester of the 2019-2020 academic year, the Attitude Scale for the Contemporary Art Practice Course, the Self-Efficacy Perception Scale for the Art Lessons, and the Contemporary Art Practice Course Achievement Test were applied. The academic achievement test was applied to the research group using the 'moddle' program in both the pre-test and post-test. To ensure the reliability of the exams in the distance education process, a certain amount of time was allowed for the questions, the program was prevented from going back and looking at the old questions through this program and this process was kept under the control of the researcher with the video zoom program 'zoom'.
- Active learning is not just a single method or technique but is a broad repertoire of many methods and techniques designed to activate students in the learning process (Weimer, 2002). Active learning methods and techniques have an important place in effective classroom management by ensuring the permanence of what is learned. The fact that not every method or technique is suitable for all subjects made it necessary to diversify them (Cengizhan, 2016).

- For this reason, following the target and target behaviors determined under the content, the lessons were taught in the research group using active learning methods *'brainstorming, demonstration, speech ring, story making and Phillips 66'* 2 hours a week. Lessons are taught in 'zoom' by the distance education process. Lessons are taught as 2 hours depending on the weekly lesson time.
- In this research, four different Contemporary Art Practices activities were carried out. These activities were carried out in terms of basic information about art, art movements, examples of artists' works, and application dimensions. These activities were carried out under the features of active learning techniques. The activities carried out are:

Activity 1.

Accompanied by a PowerPoint presentation, the researcher explained the basic concepts of contemporary art and art. They followed the subject from the pre-prepared worksheets of the students. For an object to be a work of art, it was ensured that each student shared his ideas about the subject with other group members when his turn came using the speech ring technique on what the conditions were, how art movements and groups formed. In this process, the members of the group were allowed to listen to their talking friends without interruption until their term was completed.

Activity 2.

For the information on different art movements to be permanent, the artists were asked to discuss the problem of copying in contemporary art by giving various examples. By using Phillips 66 technique, which is one of the active learning techniques, it is aimed to generate ideas and participate in the subject. By the Phillips 66 technique, which is the group discussion technique, students were asked to choose a chairman and a printer among themselves by creating 2 groups. A week before the application of this technique to students, resources, and worksheets related to the subject were sent by mail as pdf. The groups were given six minutes to discuss the topics during the lesson hours, and the different ideas that emerged were reported by the printer and sent to the researcher by e-mail. After completing the work of the groups, they made a short presentation using the zoom program.

Activity 3.

Reflection work was made with visual materials created inspired by instructional works and tactics used in active learning. The class was randomly divided into 3 groups, using the subject (the emergence of the word Art, the types of art and the branches of science dealing with art) and materials (drawing paper, pictures of the Impressionist period, pastel paint, watercolor, and colored pencils), and the technique was carried out with a reproduction technique. The works created in the course were exhibited in a virtual environment created on 'facebook'.

Activity 4.

With the emergence of the ‘Dada art movement’, the groups were asked to complete a story left unfinished. The groups were given 15-20 minutes to work, and the researcher guided them. The stories were read by the group spokespeople in the zoom program. Students in other groups were asked to evaluate the stories read.

At the end of the 5th week, the Attitude Scale for the Contemporary Art Practices Course, the Self-Efficacy Perception Scale for the Art Courses and the Achievement Test of the Contemporary Art Applications were applied to the research group.

Findings and Comments

Whether the data obtained in the study shows normal distribution or not was analyzed in the SPSS package program with Shapiro-Wilktest and the results are presented in Table 2.

Table 2. Scale data shapiro-wilk test results

		Statistics	SD	P
AQRCAPC	Pre-test	,912	14	,058
	Post-test	,954	14	,578
SEPQAC	Pre-test	,908	14	,215
	Post-test	,932	14	,147
CAPCAT	Pre-test	,903	14	,095
	Post-test	,945	14	,125

When Table 2 is examined, it can be said that each data set shows normal distribution ($p > 0.05$). Since the normal distribution of pretest and posttest scores means that parametric tests (t-test) can be applied to the data, in this study, whether there is a significant difference between the students' AQRCAPC pre-test and post-test mean scores was examined using the related sample t-test technique and the results were presented in Table 3. It is given in.

Results for the First Sub-Problem

Table 3. Correlated sample t-test results of the students' aqrcapc pretest and posttest average scores

	n	X	S	SD	t	p
Pre- Test	14	18.17	3.21	13	-3,658	0,004
Post- Test	14	24.98	2.07			

As seen in Table 3, there is a statistically significant difference between the pre-test averages and the post-test averages according to the related sample t-test results [$t(13) = -3,658, p = .004 < .05$]. This difference is in favor of post-test averages. Therefore, it can be said that active learning techniques have a positive effect on students' attitudes towards Contemporary Art Practices course.

Results for the Second Sub-Problem

In the study, whether there was a significant difference between the students' pre-test and post-test mean scores of SEPQAC scale was examined by using the related sample t-test technique and the results are given in Table 4.

Table 4. Correlated sample t test results of the students' sepqac scale pretest and posttest average scores

	n	X	S	SD	t	p
Pre Test	14	48,57	3.21	13	-2,605	0,009
Post- Test	14	50,15	3.45			

When Table 4 is analyzed, it is seen that there is a slight difference between the pretest means and the posttest averages of SEPQAC scale and this difference is statistically significant [$t(13) = -2,605, p = .009 < .05$]. When the average values are compared, it can be said that this difference is in favor of the post-test. Therefore, it can be said that active learning techniques positively affect students' self-efficacy levels related to art classes.

Results for the Third Sub-Problem

In the study, whether there is a significant difference between the students' CAPCAT scale pretest and posttest mean scores was examined by using the related sample t-test technique and the results are given in Table 5.

Table 5. Correlated sample t test results of students' capcat scale pretest and posttest average scores

	n	X	S	SD	t	p
Pre-Test	14	35,48	3.18	13	-3,874	0,014
Post-Test	14	47,98	3.35			

When Table 5 is examined, it is seen that there is a difference between the pretest averages and the posttest averages in favor of the posttest and this difference is statistically significant [$t(13) = -3,874, p = .014 < .05$]. Therefore, it can be said that active learning techniques affect students' academic success positively in the Contemporary Art Practices course.

Results and Discussion

Learning in the process of raising individuals of the 21st century is not a passive process; It should be considered that it is an effective, continuous, developmental and a process that requires the active participation of the learner. Therefore, today's students are expected to be active learners. In line with these changing roles; they need to know what, why, and how to learn, to take responsibility for their own learning, that is, to learn. In line with this understanding, the effect of active learning techniques applied in the distance education process on students' attitudes, self-efficacy, and academic achievement in the Contemporary Art Practices course was examined.

In this study, in which the effect of active learning approach on undergraduate students' attitude, self-efficacy, and academic achievement in the Contemporary Art Practices course were examined, the relationship sample t-test was used to compare the data obtained before and after active learning activities of the research group. According to the t-test results related to the first sub-problem of the research group, Contemporary Art Practices Course Attitude Questionnaire was obtained between the pre-test averages and post-test averages in terms of statistical significance [$t(13) = -3,658, p = .004 < .05$]. Therefore, it can be said that active learning techniques have a positive effect on students' attitudes towards Contemporary Art. The intense use of technology, which is an indispensable element of today, especially in the distance education process may have influenced this result. As a result of the research in Shaban (2017), in which students investigated the effect of using technological tools on the active learning process in learning activities, the technology showed that technology contributes to the increase in students' level of participation, supports their critical thoughts and encourages cooperation.

As Drexler (2010) puts it, effective integration of technology can have significant positive results in students' learning. For example, the use of technology can transform the traditional teacher-centered classroom environment into a student-centered environment. Also, the research results of Orak and Demirci (2018) examining the effect of active learning on students' level of interest in the course support these findings. They concluded that the students liked the art-supported active learning techniques and that this increased interest in the lesson. Many studies in the literature prove that the active learning approach is effective on success, attitude and permanence (Cooper et al. 1998; She & Fisher, 2003; Tavşancıl, 2002). In the research, it is determined that there is a small difference between the pre-test averages and the post-test averages in favor of the post-test for the Self-Efficacy Perception Questionnaire for Art Lessons related to the second sub-problem [$t(13) = -2,605, p = .009 < .05$]. Therefore, it can be said that active learning techniques positively affect students' self-efficacy levels related to art classes. According to the research results carried out by Hyun, Ediger and Lee (2017) to increase the student participation of Active Learning Classes, it has been determined that active learning pedagogy activities are important factors that increase the satisfaction of students from individual and group learning processes. There are many types of research that active learning ensures the permanence of knowledge (Lin et al. 2011; Servetti, 2010). Therefore, it may have led to an increase in academic achievement due to the increased interest and persistence of students towards the lesson with active learning. In the study conducted by Virtanen et al. (2017), the relationships between active learning experiences and the acquisition of professional qualifications were investigated. It was concluded that the use of active learning methods is important for developing students' professional competencies. Besides, different studies in the literature support these findings (Kaasila & Lauriala, 2012; Kramarsky & Michalsky, 2009; Lynch et al., 2012).

The effect of the research on the achievements of the Contemporary Art Practices course, which is the third sub-problem, was examined, and as a result, it was observed that there was a difference between the pre-test averages and post-test averages in favor of the post-test and this difference was statistically significant [$t(13) = -3,874, p = .014 < .05$]. Therefore, it can be said that active learning techniques affect students' academic success positively in the Contemporary Art Practices course. The findings of many types of researches related to active learning in different fields also support this result (Süzen, 2007; Günhan, 2006; Aydede, 2006; Özkal, 2000). Learning takes place only when students leave the passive listener position and become active participants (Hawtrey, 2007). This realization of learning is the basis of active learning. With active learning, thinking, processing, and learning by living instead of just listening takes place. This encourages students to be responsible for their own learning (Greene, 2011; Michel et al. 2009; Quinlan & Fogel, 2014).

Therefore, in this research, in which active learning methods are carried out, it is thought that students actively participate in the process by using technology and directing the process by taking responsibility may increase their academic success. With active learning, thinking, processing, and learning by living instead of just listening takes place. This encourages students to be responsible for their learning (Greene, 2011; Michel et al. 2009; Quinlan & Fogel, 2014). Therefore, in this research, in which active learning methods are carried out, it is thought that students actively participate in the process by using technology and directing the process by taking responsibility may increase their academic success. With active learning, thinking, processing, and learning by living instead of just listening takes place. This encourages students to be responsible for their learning (Greene, 2011; Michel et al. 2009; Quinlan & Fogel, 2014). Therefore, in this research, in which active learning methods are carried out, it is thought that students actively participate in the process by using technology and directing the process by taking responsibility may increase their academic success. Based on the findings obtained in the research, researchers may be recommended.

- In order for the learning to be permanent in the course, learning environments should be created in which students will be remembered with the activities.
- It accommodates the content of the art course with many different techniques it contains in active learning methods. Therefore, different active methods should be used in a course as much as possible.
- Students' level of readiness should be considered.
- The results obtained in this study can help in developing the curriculum of general art history lessons.

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