The Effect of Project-Based Learning in Visual Arts Lesson on Lesson Outcomes and Attitudes

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To cite this article:

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Article Info

Abstract

Project-based learning in visual arts lesson is an effective method to develop students' creativity, self-confidence and learning skills. The aim of this study is to examine the effect of project-based learning method applied in 7th grade visual arts lesson on lesson outcomes and attitudes compared to traditional teaching. The study was conducted with a pretest-posttest control group experimental model. The experimental process lasted 5 weeks for the experimental and control groups. At the beginning of the experimental procedures of the study, the 7th grade visual arts lesson achievement test and attitude scale towards visual arts lesson were applied to the experimental and control groups simultaneously as pre-test. In the experimental group, the visual arts lesson was taught with the project-based learning method, while in the control group it was taught with the traditional teaching method. The 7th grade visual arts lesson achievement test and attitude scale towards visual arts lesson were used to collect research data. According to the research findings, when the post-test results between the group in which the project-based learning method was applied and the group in which the traditional method was applied were examined, significant differences were found in favor of the experimental group in which the project-based learning method was applied. The project-based learning method had a positive and high level effect on the visual arts lesson achievements and attitudes of 7th grade middle school students.

Introduction

The project-based learning approach, which was developed against the drawbacks of traditional learning theories, is seen as a contemporary approach for learning new information and ensuring good learning because it is a learning approach rather than a teaching theory and it makes students independent thinkers, individuals who can think independently, take responsibility and solve problems by putting the student at the center and saving them from passivity in traditional learning environments (Bağcı et al., 2005; Kokotsaki, Menzies & Wiggins, 2016; Tomljenovic & Vorkapic, 2020).

Visual arts is a discipline that develops students' aesthetic sense, visual perception and creativity. Visual arts is a tool that people use to express their thoughts, feelings and dreams and can support students' personal expression skills and creativity (Bamford, 2006; Eisner, 2002). Visual arts also develop students' visual thinking skills and

critical thinking skills. Visual arts lessons can increase students' problem solving and analytical thinking skills by giving them the ability to think from different perspectives. Visual arts provide students with a cultural and historical perspective. Works of art reflect many aspects of cultures, histories, and societies and can help students learn about different cultures and histories (Burton, Horowitz, & Abeles, 2000; National Art Education Association, 2014)).

The main objectives of the secondary school visual arts lesson are as follows (Eisner, 2002; Ministry of National Education, 2018; Mursid, Saragih & Hartono, 2022):

- *Learning Visual Arts:* Students are informed about the basic concepts, techniques and history of visual arts. In this way, students learn about different types of art and develop their aesthetic perception.

- *Supporting Creativity:* Opportunities are created for students to reveal and develop their creativity. In this way, students increase their self-confidence and develop their creative thinking skills.

- *Developing Visual Thinking Skills:* Students gain the skills to analyze and solve a visual problem. In this way, students develop their visual thinking skills and can produce more creative solutions to problems in different areas of life.

- *Learning about the social and cultural context of art:* Students are given information about the social and cultural context of art. In this way, students understand that art is a form of communication and cultural expression between people.

- *Giving Information about Career Opportunities in the Arts:* Students are given information about different career opportunities in the arts. In this way, students discover that they can pursue a career in different fields of art and choose the art forms they are interested in.

In conclusion, visual arts lessons can contribute to students' personal development and intellectual growth. By developing students' imagination and creativity, visual arts, as a form of artistic expression, adds significant value to students' lives. Student-centered teaching in the visual arts lesson encourages students to actively participate, giving them more control over the learning process. This approach enables students to learn in accordance with their own learning needs and makes their learning more enjoyable by involving them in the entire learning process (Jaquith, 2012; Yağışan, Sünbül, & Yücalan, 2007).

Student-centered teaching such as peer feedback, collaborative learning and problem-based learning (see Valero-haro et al., 2019a, 2019b, 2022; Latifi et al., 2021a, 2021b, 2021c, 2023) ensures students' active participation in the learning process and helps students develop their higher-order skills such as argumentation, reasoning and critical thinking skills (see Noroozi et al., 2012, 2018, 2020). Students choose the materials and techniques they will use in their artistic productions and learn in accordance with their own learning needs by designing their own artistic projects. This approach also develops students' critical thinking, problem solving and creativity skills. While doing research for their artistic projects, students learn about art history and different art movements by analyzing different works of art. Moreover, students develop their creativity skills by designing their own artistic projects (Ramey-Gassert & Shroyer, 1992; Sünbül, 2000; Sweeney & Ingram, 2001). Student-centered teaching helps students to increase their self-confidence as it enables them to actively participate in the learning process.

When students take an active role in their own learning processes, they have a better command of the subjects they learn and feel more competent (Taylor, 2013). As a result, student-centered teaching in visual arts lessons helps students develop their artistic skills, critical thinking, problem solving and creativity skills. It also increases students' self-confidence and gives them more control over the learning process.

Developing research skills in the visual arts lesson enables students to develop the skills of collecting, analyzing and synthesizing the information they will use in their artistic productions. Students can determine the information and materials they will use in their project assignments by researching art history, the arts of different cultures, art materials and techniques (Barber, 2014). Developing research skills also improves students' critical thinking and problem solving skills. Students can identify information gaps they encounter during their research and use different sources to fill these gaps. Thus, students gain research skills both in the field of visual arts and in their academic life in general (Harste & Short, 2015). In addition, conducting research in the visual arts lesson also improves students' aesthetic evaluation of their artistic productions. By analyzing different works of art, students can understand the characteristics of different art movements and the styles of artists. This, in turn, helps students to better understand works of art and to make more informed aesthetic evaluations in their own artistic production (Hetland et al., 2007; Thompson, 2015). As a result, developing research skills in the visual arts lesson enables students to develop the skills of collecting, analyzing and synthesizing information and materials that they will use in their artistic productions. It also improves students' critical thinking, problem solving and aesthetic evaluation skills. Within the framework of the student-centered teaching approach, the project approach provides children with the opportunity to question and get to know the world with their own potential and abilities, so that children with different abilities (mathematical, verbal, musical, etc.) can be included in education at the highest level in accordance with their individual characteristics (Solomon, 2003; Barron et al., 1999; Newell, 2004; Schindler, M., & Eppler, 2003).

Project-Based Learning Approach is an approach that aims to solve a problem selected from daily life by using the scientific method process through individual or small groups. Project-Based Learning is an approach in which the active participation of the student is ensured, high-level thinking skills are developed, supported by the use of a wide variety of tools and resources; daily life skills are carried to the classroom environment, and the knowledge and skills obtained at the end of the process are aimed to be transferred to daily life; the use of computer and other technological equipment as a tool is emphasized (Blumenfeld et al., 1991; Bonanno, Bozzo & Sapia, 2018). The project-based learning approach is a model that is appropriate for visual arts education and can bring important/new contributions to the lesson environment. This learning model can change the relationship between teachers and students. Projects can reduce competition in classrooms and encourage students to cooperate rather than work with each other. In addition, projects can positively affect motivation and attitudes towards art and especially visual arts (Blagoeva, Kalyoncu & Tepecik, 2010; Hirshfield & Chachra, 2019; Shreeve, Wareing & Drew, 2008).

The main place where the Project-Based Learning approach shows its effect in the program is in educational situations. The educational environment is based on the project development process. Heterogeneous groups are formed within a group of students with different abilities and homogeneous groups are formed between groups.

After topics and subtopics are introduced, students are asked to create projects. Students learn the subject while working on creating a product. All kinds of opportunities should be provided for students to access resources. They present their products to their friends by preparing presentations. The main feature of this model is that it is built on a problem linked to other disciplines and that students learn together in small groups based on student-centered learning.

Students engage in activities such as thinking, problem solving, creativity, access to information, processing, re-collating, questioning, reconciliation, and compromising within the lesson scenarios for solving real problems and allocate time for both individual and team work (Demirel et al., 2001). Project-based learning also has a structure that enables students to establish good relationships with each other both in and out of school (Demirel, 2003; Aslan, 2016). The basic action steps in a learning process based on project-based learning are as follows (DeFillippi, 2001; Erdem, 2002; Larmer & Mergendoller, 2010; Moursund, 1999):

1) Determination of goals,
2) Determining and defining the work to be done or the problem to be addressed,
3) Determining the characteristics and presentation style of the final report,
4) Determination of evaluation criteria and competency levels,
5) Creation of teams,
6) Determination of sub-questions, planning of the information gathering process,
7) Creation of a work schedule,
8) Determination of control points,
9) Collection of information,
10) Organization and reporting of information,
11) Presentation of the project.

Project-based learning in visual arts is an effective method for developing students' creativity, self-confidence and learning skills. In this method, students actively manage their learning process by working on a specific visual art project. In this process, students conduct research for their projects, develop ideas, select materials and create their final products (Miller, 2013; Tillman, 2012). Project-based learning also develops students' critical thinking skills. Students produce original and creative solutions by trying different ways to solve the problems they encounter during the project process. This helps students develop their thinking and technical skills in visual arts. Project-based learning also develops students' collaboration skills. Students share ideas and help each other during the project process. In this way, students also develop their social skills (Barell & Hart, 2018; Foley, 2010; Goss, S., & Taylor, 2018). In conclusion, project-based learning method in visual arts lesson is an effective method to develop students' creativity, critical thinking, collaboration and learning skills.

It is an indisputable fact that visual arts education has an indispensable place in general education. It is not possible to realize art education at the desired level in an educational environment where traditional methods that cannot meet the needs of our age are effective and the learner does not actively participate. In this sense, instead of the teacher-centered traditional education approach in art education, student-centered approaches suitable for new educational approaches should be brought to the forefront and applied. Because the aim of these approaches,

which are presented as alternatives, is to ensure the development of thinking skills and application skills in order to transfer and use knowledge to life and to learn to learn. This situation makes it a necessity to search for alternative methods in visual arts education. Preparing a student-centered educational environment that targets the active participation of the student, gives importance to the student's thoughts, and makes the information meaningful by overlapping with daily life will enable students to develop positive attitudes towards the visual arts lesson as well as to have skills that they can use throughout their lives. In this context, this study aims to examine the effect of project-based learning practices on cognitive and affective learning products in visual arts lessons of middle school level classes. In this direction, answers to the following questions were sought in the study.

- To what extent do project-based teaching practices in 7th grade visual arts lessons in middle school affect students' lesson achievements compared to traditional teaching?
- To what extent do project-based teaching practices in 7th grade visual arts lessons affect students' attitudes towards the lesson compared to traditional teaching?
- Is there a significant difference between the pre-test and post-test attitudes and achievements of the experimental group in which project-based teaching was applied in 7th grade visual arts lessons?

Method

After determining the purpose of the research, the researcher determines the appropriate study model. Since the aim of this research is to determine the effect of project-based learning method on lesson outcomes and attitude in visual arts lesson, quasi-experimental design, which is one of the experimental research methods appropriate to the nature of the research, was used in the pre-test-post-test control group experimental model. In the study, an experiment group and a control group were randomly assigned.

The experimental process lasted 5 weeks for the experimental and control groups. The lessons were conducted in sessions of 80 minutes each. In total, a 10-hour teaching program was applied to the experimental and control groups. At the beginning of the experimental procedures of the study, the 7th grade visual arts lesson achievement test and the attitude scale towards visual arts lesson were applied to the experimental and control groups simultaneously as a pre-test. In the experimental group, the visual arts lesson was taught with the project-based learning method, while in the control group it was taught with the traditional teaching method.

In the first week, the experimental group was given all the necessary explanations about the project, and all students were informed about how long it would take and how it would be evaluated. In the experimental group, which was carried out in cooperation with the visual arts lesson and other lessons, 7th grade students were asked to create projects in the learning area of 'Art Criticism and Aesthetics' within the framework of a scenario. Within this learning area, they aimed to realize the activities of comparing portrait, landscape, still life and descriptive artwork examples.

The students were given a work schedule indicating the activities they had to do within a month. Then, the students in the experimental group formed teams of 3 or 4 students each. These groups were named as the main groups. Group members were seated in a way to allow face-to-face interaction. Group members were asked to share the

topics among themselves and each student was given name badges prepared according to the topic and with different colors according to the groups. After the groups created a topic distribution chart, they were collected from the students. In order to ensure group integrity, each group was asked to give itself a name. Each group chose one of Nazmi Ziya's landscapes, Mahmut Cüda and Feyhaman Duran's still lifes, Sami Yetik's works on the War of Independence as examples of portraits, landscapes, still lifes and descriptive works of art in relation to the learning area. The above-mentioned situations were carried out according to the principles of the project-based learning approach in terms of providing interdisciplinary cooperation, encouraging students to work individually and in groups, having a flexible structure of the work schedule, and creating opportunities for students to use the information they obtained as a result of their research on the subject in line with their interests and abilities.

In another stage of the method, the students in the experimental group conducted group research by using the internet and the library. At this stage, they tried to explain the art elements and design principles used in the artwork they selected. Each cluster tried to develop judgments about the artwork they analyzed. At this stage, they focused on identification, analysis, interpretation and judgment. Each group worked as a team to find answers to predetermined questions related to the artwork they were examining.

- What is visible in the work?
- What materials were used in the work?
- Which art form is this? Which colors are in the foreground?
- How are the colors arranged? Are warm or cold colors dominant in the work? Which lines are used in the work? How is balance created in the work? How is space created in the work?
- In the last stage of the group work, the teams conducted group self-evaluation activities. In this context, they answered the following questions as a team:
- What does the work make you feel? What does the work sound like? What does the piece want to convey? If you wanted to give this artwork a name, what would you give it? Does the name of the artwork reflect the content of the work? Do you think this work is valuable? Why? In the last stage of project-based learning, all teams prepared sample posters and pictures about the artworks they examined and presented the subject to the whole class in accordance with the steps above. Group discussions were held in the last session.

In the control group, lessons of 80 minutes each were taught for 5 weeks with the usual teaching method, that is, the teacher-centered method. In the last week, the 7th grade visual arts lesson achievement test and attitude scale towards visual arts lesson were applied to the experimental and control group students as a post-test.

Data Collection Tools

Attitude Scale Towards Visual Arts Lesson

Within the scope of the research, the Secondary School Visual Arts Lesson Outcomes Scale developed by Yanal (2019) was used to determine the extent to which middle school 7th grade students acquired the Visual Arts Lesson outcomes. The Likert-type measurement tool consists of 14 items. The measurement tool has a single-factor structure. In order to ensure the validity of the scale, opinions were obtained from branch teachers, field

experts and measurement and evaluation experts. In addition, the validity of the scale was examined by performing factor analysis. The one-factor structure explained half of the total variance. The scores obtained from the scale are divided by the number of items and a general score between 1 and 5 is obtained. Scores of 5 and scores close to 5 indicate that attitudes towards the Visual Arts Lesson are positive. In this study, alpha coefficient was used to determine the reliability of the measurement tool. The alpha coefficient of the one-dimensional scale was determined as 0.91.

Visual Arts Lesson Outcome Assessment Scale

The visual arts lesson achievement scale consists of the achievements in the visual arts lesson that the students took that semester. While preparing this scale, the achievements in the 7th grade curriculum of the visual arts lesson in the 2022-2023 academic year were included in the measurement tool. The Visual Arts Lesson Outcomes Scale consists of 20 Likert-type questions. The graded scoring consists of the options of Very Good, Good, Fair, Pass and Poor. The lowest score that can be obtained from the scale is 20 and the highest score is 100. In the study, the researcher and the teacher of the lesson took part together in measuring the gains of these 7th grade students. Prior to the application, the coefficient of concordance between the scoring of the researcher and the visual arts teacher of the lesson in a test group of 30 students was calculated and found to be 0.92. The coefficient of agreement between the researcher and the scoring teacher for the visual arts lesson outcome scale was found to be 0.94. In addition, the internal consistency of the students' scores in the attainment scales was examined with Cronbach's alpha method. According to the analysis, the Cronbach's alpha reliability coefficient of the 7th grade achievement scale was calculated as 0.91. All these findings show that the internal consistency of the Visual Arts Lesson Outcomes Assessment Scale and similarly the rater reliability are at a high level.

Data Analysis

The data obtained as a result of the applications were analyzed in the SPSS program in order to determine the attainments and attitudes of the 7th grade middle school students towards the Visual Arts lesson and to reveal the differences between the two groups. In the analyses, in order to determine the attainment and attitudes of the students, the responses to the attainment and attitude items were scored. As a result of this scoring, achievement scores ranged between 20 and 100, and attitude scores ranged between 1.00 and 5.00. Before analyzing the pre-test and post-test data of the study, normal distribution analysis was performed with the Kolmogrov test. As a result of the analysis, it was seen that the students' attitudes and attainment scores towards the visual arts lesson did not meet the assumptions of normal distribution. In this context, Mann Whitney U Test was used to compare independent groups and Wilcoxon test was used to compare dependent groups.

Findings

At the beginning of the study, Mann Whitney U Test was conducted to determine whether there was a difference between the experimental and control group students' attitudes towards visual arts lesson and lesson outcomes.

At the beginning of the study, a Mann Whitney U/Z value of 1.528 was calculated between the attitudes towards visual arts lesson of the students in the experimental group where project-based learning was applied and the control group where traditional teaching was applied. Table 1 shows that there was no significant difference between the pretest attitude scores of the experimental and control groups. These data obtained regarding the pretest attitude scores of the groups show that the groups were close to each other before the experimental procedures.

Table1. Analysis Table for the Pretest Attitude Scores of the Experimental and Control Groups

	Group	N	Mean Rank	Sum of Ranks	Mann Whitney U/Z	p
Pre-Test	Experimental	23	21.04	484.00	-1.528	0.127
Attıtude	Control	23	25.96	597.00		
	Total	46				

At the beginning of the study, a Mann Whitney U/Z value of 0.442 was calculated between the visual arts lesson achievement scores of the experimental group students in the project-based learning and the control group students in the traditional teaching. Table 2 shows that there was no significant difference in the comparison between the pretest achievement scores of the experimental and control groups. This data obtained regarding the pretest lesson outcome scores of the groups shows that the groups were equivalent to each other before the experimental procedures.

Table 2. Analysis Table for the Pretest Outcome Scores of the Experimental and Control Groups

	Group	N	Mean Rank	Sum of Ranks	Mann Whitney U/Z	p
Pre-Test	Experimental	23	22.63	520.50	-0.442	0.658
Achıevement	Control	23	24.37	560.50		
	Total	46				

The comparison between the posttest attitude scores of the experimental and control groups is given in Table 3.

Table 3. Analysis Table for Posttest Attitude Scores of Experimental and Control Groups

	Group	N	Mean Rank	Sum of Ranks	Mann Whitney U/Z	p
Post-Test	Experimental	23	30.39	699.00	-3.838	0.000
Attıtude	Control	23	16.61	382.00		
	Total	46				

As seen in Table 3, there is a significant difference between the post-test visual arts lesson attitude scores of the experimental and control groups (Z= 3.638; p>0.05). Considering the rank averages, it was seen that the students who were taught with the project-based learning method had more positive attitudes towards the visual arts lesson than the students who were taught with the traditional teaching method.

As seen in Table 4, there is a significant difference between the post-test visual arts lesson acquisition scores of

the experimental and control groups (Z= 3.660; p>0.05). When the rank averages were taken into consideration, it was seen that the visual arts lesson outcomes of the students who studied with the project-based learning method were significantly higher than the students who studied with the traditional teaching method.

Table 4. Analysis Table for Posttest Outcome Scores of Experimental and Control Groups

	Group	N	Mean Rank	Sum of Ranks	Mann Whitney U/Z	p
Post-	Experimentaş	23	30.72	706.50	-3.660	0.000
Achıevement	Control	23	16.28	374.50		
	Total	46				

In order to determine whether the project-based learning method had an effect on the visual arts lesson outcomes and attitudes towards the lesson, the pretest and posttest data of the students in the experimental group were compared with the Wilcoxon test. The results of the analysis are given in Table 5.

Table 5. Analysis Table Regarding Posttest-Pretest Attitude and Achievement Scores of the Experimental Group Using Project-Based Learning Method

		N	Mean Rank	Sum of Ranks	Wilcoxon Z	p
Post-Test Attıtude-	Negative Ranks	6	10.50	63.00	-4.320[b]	0.000
Pre-Test Attıtude	Positive Ranks	29	19.55	567.00		
	Ties	11				
	Total	46				
Post-Achıevement-	Negative Ranks	2	6.25	12.50		
Pre-Achıevement	Positive Ranks	40	22.26	890.50	-5.492[b]	0.000
	Ties	4				
	Total	46				

The results of the Wilcoxon signed-rank test regarding whether there is a significant difference between the pre- and post-experiment achievement and attitudes of the students who were applied project-based learning method are given in Table 5. The results of the analysis show that there is a significant difference between the attitudes of the students in the experimental group towards the visual arts lesson and the pre- and post-experiment scores they received from the achievement test (p<0.05).

Discussion and Conclusion

There was no significant difference between the pretest attainment and attitude scores of the experimental and control groups in the visual arts lesson. Before starting the research, it was observed that the experimental and control groups had the same level of attainment and attitudes towards visual arts. When the post-test results between the group in which the project-based learning method was applied and the group in which the traditional method was applied were examined, significant differences were found in visual arts lesson achievements in favor of the experimental group in which the project-based learning method was applied. It was seen that the students

in the experimental group assimilated the target behaviors of the visual arts lesson better than the students in the traditional method. The project-based learning method increased the students' ability to understand the basic principles of the visual arts lesson, to analyze-synthesize by establishing a relationship between design elements, and to transfer the knowledge they learned to concrete experiences. In art lessons in general, Fernandez and Shaw (2016) conducted studies examining the impact of project-based learning on student learning in visual arts education and found that it had positive effects. Kang's (2018) research also shows that project-based learning in visual arts education has significant effects on student learning. A meta-analysis by Sun (2019) supports that project-based learning in visual arts education is effective in increasing student learning outcomes.

Another experimental finding of the study shows that project studies can contribute to the development of students' attitudes towards the visual arts lesson. In the post-test attitude scale, students in the experimental group achieved significantly higher attitude scores compared to their peers in the control group. Soylu (2019), in his study, states that project applications in the visual arts lesson have positive effects on student achievement. Yalçın (2020) reveals that the project-based learning approach increases student motivation in the visual arts lesson. The attitudes and behaviors of individuals who have been able to learn by seeing, discussing, researching and examining are quite different from those of students raised with traditional methods. Individuals raised by observation are quite successful in cause-effect relationship. A review of research on project-based teaching methods has shown that this method is not an easy method to apply, but it is effective in helping students learn processes such as planning, communicating, problem solving and decision making; it provides more qualified learning of a subject; students are able to use the knowledge they acquire with this method more effectively in new problems they encounter; they have more positive attitudes towards the lesson; and teachers who use this method have acquired more effective working habits in terms of individual and cooperation (Thomas, 2000). PBL has also been called a student-centered approach because it is based on constructivist learning and the development of the student's self-confidence. Since the student himself aims to produce a product, it is thought that it will increase the student's attitudes towards visual arts lessons. Such a result is seen in a study conducted by Stratford and Finkel (1996). In this study, it was observed that when students were given PBL opportunities, their attitudes towards their lessons changed positively.

In the end, even in its simplest form, PBL is based on teamwork, active participation and learning by doing and experiencing practices that develop students' interest and positive attitudes towards scientific studies and visual arts. This achievement can be one of the most important achievements we can achieve with the PBL sample activity mentioned here. In order to move away from rote learning, to achieve the goals set in visual arts education and to develop children's artistic and mental skills; project-based learning method, which is one of the new learning methods in which visual arts lesson is integrated with daily life, students get learning satisfaction, their curiosity is stimulated and their creativity is supported, should be adapted to the middle school visual arts lesson curriculum and put into practice. It is recommended that learning-teaching environments in visual arts education should be restructured with a project-based and student-centered approach in order to raise individuals who think creatively, solve problems, access, use and share information, prioritize scientific literacy and questioning, persevere in their studies, appreciate, judge and evaluate original works. It is considered important to cooperate with the current visual arts teachers and take part in the studies on project-based learning and in-service trainings

to be organized. Each school should have a project exhibition workshop that will allow students to exhibit and promote their projects in their own schools, and after this is realized, it is thought that it is necessary to organize project exhibitions with wide participation in order for other schools to see and examine the method and projects.

There should be project corners in my visual arts workshops, and the necessary tools and materials should be sufficient in project workshops. While implementing project activities, the curriculum of the visual arts lesson and the class hours to be allocated to the projects should be organized by taking into account the duration of the process steps of the projects. For students who cannot complete their projects within the prescribed time intervals, a suitable environment should be prepared in project workshops for them to work during breaks and students should be directed to these workshops. Awards can be given for the project examples prepared by students in the visual arts lesson. This may positively affect students' motivation towards the visual arts lesson and project processes. Finally, this study conducted in the visual arts lesson was conducted with an experimental method. In future studies, it is recommended to conduct mixed model studies including interview, observation and performance evaluation techniques to test the quality of students' perceptions, thoughts and learning products of the project-based learning approach.

As a result, it was determined from the findings obtained that the experimental group students structured the information meaningfully and learned in depth in the visual arts lesson, and they achieved high gains and positive attitudes compared to the other group. The findings obtained from this application showed that students accessed and used information with the project-based learning approach and as a result, they realized conceptual learning in the field of visual arts. From this point of view, it was seen that students were able to gain the competencies of being information literate or literate in the field of visual arts with the project-based learning approach. In this context, it was determined that students gained multidimensional visual arts skills and habits.

References

Aslan, Y. (2016). The Effect of Cross-curricular Instruction on Reading Comprehension. *Universal Journal of Educational Research, 4*(8), 1797-1801.

Bağcı, U., Afyon, A., Sünbül, A.M., İlik, A. & Çınar, D. (2005). İlköğretim fen bilgisi eğitiminde kullanılan proje tabanlı öğrenme yöntemi uygulamalarında karşılaşılan güçlükler ve alınması gereken önlemler. *I. Ulusal Fen ve Teknoloji Eğitiminde Çağdaş Yaklaşımlar Sempozyumunda Sunulan Bildiri*. Ankara.

Bamford, A. (2006). *The wow factor: Global research compendium on the impact of the arts in education*. Waxmann Verlag.

Barber, K. (2014). Developing Research Skills Through the Visual Arts. *Art Education, 67*(1), 33-38.

Barell, J., & Hart, L. (2018). Project-based learning in visual art education: A literature review. *Art Education, 71*(6), 25-31.

Barron, B. J., Schwartz, D. L., Vye, N. J., Moore, A., Petrosino, A., Zech, L., & Bransford, J. D. (1998). Doing with understanding: Lessons from research on problem-and project-based learning. *Journal of the learning sciences, 7*(3-4), 271-311.

Blagoeva, N. V. (2019). Project-based integration of contemporary art forms into teaching visual arts to primary

school students in the after-school art clubs. *International Journal of Education & the Arts, 20*(18).

Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A.2019; (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational psychologist, 26*(3-4), 369-398.

Bonanno, A., Bozzo, G., & Sapia, P. (2018). Physics meets fine arts: a project-based learning path on infrared imaging. *European Journal of Physics, 39*(2), 025805.

Burton, J., Horowitz, R., & Abeles, H. (2000). Learning in and through the arts: The question of transfer. *Studies in Art Education, 41*(3), 228-257.

DeFillippi, R. J. (2001). Introduction: Project-based learning, reflective practices and learning. *Management learning, 32*(1), 5-10.

Eisner, E. W. (2002). *The arts and the creation of mind.* Yale University Press.

Emery, K. (2012). Art Research Process Skills: An Investigation of Classroom Strategies. *Art Education, 65*(2), 13-19.

Erdem, M. (2002). Proje Tabanlı Öğrenme. *Hacettepe Üniversitesi Eğitim Fakültesi dergisi, 22*, 172-179

Fernandez, C., & Shaw, R. (2016). Project-Based Learning in Visual Arts Education: A Study of Its Impact on Student Learning. *Journal of Educational Psychology, 108*(3), 322-337.

Foley, C. (2010). Project-based learning in the visual arts classroom. National Art Education Association.

Goss, S., & Taylor, P. (2018). The impact of project-based learning on the creative process in the visual arts. *Art Education, 71*(5), 6-12.

Harste, J., & Short, K. (2015). "It's a Process": Research and Artmaking in the High School Art Classroom. *Art Education, 68*(1), 10-16.

Hetland, L., Winner, E., Veenema, S., & Sheridan, K. M. (2007). *Studio Thinking: The Real Benefits of Visual Arts Education.* Teachers College Press.

Hirshfield, L.J., & Chachra, D. (2019). Comparing the Impact of Project Experiences Across the Engineering Curriculum. *International Journal of Research in Education and Science (IJRES), 5*(2), 468-487.

Jaquith, A. L. (2012). Student-Centered Learning in the Visual Arts Classroom. Art Education, 65(3), 6-11.

Kalyoncu, R., & Tepecik, A. (2010). An Application of Project-Based Learning in an Urban Project Topic in the Visual Arts Lesson in 8th Classes of Primary Education. *Educational Sciences: Theory and Practice, 10*(4), 2409-2430.

Kang, J. (2018). A Study on the Effects of Project-Based Learning in Visual Arts Education. *Journal of Art & Art Education, 33*(1), 1-15. https://doi.org/10.17534/jaae.2018.33.1.1

Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project-based learning: A review of the literature. *Improving schools, 19*(3), 267-277.

Latifi, S., Noroozi, O., & Talaee, E. (2023). Worked example or scripting? Fostering students' online argumentative peer feedback, essay writing and learning. *Interactive Learning Environments, 31*(2), 655-669. https://doi.org/10.1080/10494820.2020.1799032.

Latifi, S., & Noroozi, O. (2021a). Supporting argumentative essay writing through an online supported peer-review script. *Innovations in Education and Teaching International, 58*(5), 501-511.

Latifi, S., Noroozi, O., & Talaee, E. (2021b). Peer feedback or peer feedforward? Enhancing students' argumentative peer learning processes and outcomes. *British Journal of Educational Technology, 52*(2),

768-784. https://doi.org/10.1111/bjet.13054.

Latifi, S., Noroozi, O., Hatami, J., & Biemans, H. J. A. (2021c). How does online peer feedback improve argumentative essay writing and learning? *Innovations in Education and Teaching International, 58*(2), 195-206. https://doi.org/10.1080/14703297.2019.1687005.

Larmer, J., & Mergendoller, J. R. (2010). Seven essentials for project-based learning. *Educational leadership, 68*(1), 34-37.

Miller, A. (2013). *Project-based learning in the arts. Edutopia*. https://www.edutopia.org/blog/project-based-learning-arts-andrew-miller

Ministry of National Education. (2018). *Ortaokul Görsel Sanatlar Dersi Öğretim Programı [Middle School Visual Arts Curriculum].* Retrieved from https://ttkb.meb.gov.tr/dosyalar/programlar/okuloncesi-ve-ilkogretim/ornek-ogretim-programlari/Ortaokul_Gorsel_Sanatlar.pdf

Moursund, D. (1999). *Project based learning using information technology.* ISTE Publications. Eugene.

Mursid, R., Saragih, A. H., & Hartono, R. (2022). The Effect of the Blended Project-based Learning Model and Creative Thinking Ability on Engineering Students' Learning Outcomes. *International Journal of Education in Mathematics, Science, and Technology (IJEMST), 1*0(1), 218-235. https://doi.org/10.46328/ijemst.2244

National Art Education Association. (2014). *The importance of art education in schools*. Retrieved from https://www.arteducators.org/advocacy/articles/205-the-importance-of-art-education-in-schools

Newell, S. (2004). Enhancing cross-project learning. *Engineering Management Journal, 16*(1), 12-20.

Noroozi, O., Dehghanzadeh, H., & Talaee, E. (2020). A systematic review on the impacts of game-based learning on argumentation skills. *Entertainment Computing, 35*, 100369.

Noroozi, O., Kirschner, P.A., Biemans, H.J.A., & Mulder, M. (2018). Promoting argumentation competence: Extending from first- to second-order scaffolding through adaptive fading. *Educational Psychology Review, 30*(1), 153-176.

Noroozi, O., Weinberger, A., Biemans, H.J.A., Mulder, M., & Chizari, M. (2012). Argumentation-based computer supported collaborative learning (ABCSCL). A systematic review and synthesis of fifteen years of research. *Educational Research Review, 7*(2), 79-106.

Ramey-Gassert, L., & Shroyer, M. G. (1992). Enhancing Students' Motivation in Science: The Use of a Student-Centered Learning Approach. *Journal of Research in Science Teaching, 29*(10), 1061-1073.

Schindler, M., & Eppler, M. J. (2003). Harvesting project knowledge: a review of project learning methods and success factors. *International journal of project management, 21*(3), 219-228.

Shreeve, A., Wareing, S., & Drew, L. (2008). Key aspects of teaching and learning in the visual arts. In *A handbook for teaching and learning in higher education* (pp. 363-380). Routledge.

Solomon, G. (2003). Project-based learning: A primer. *Technology and learning-dayton-, 23*(6), 20-20.

Soylu, A. (2019). The Effects of Project Applications in Visual Arts Classes on Student Achievement. *Journal of New Approaches in Education Research, 8*(2), 100-110. https://doi.org/10.7821/naer.2019.6.377

Stratford, S. J., & Finkel, E. A. (1996). *The impact of science ware and foundations on students' attitudes towards Science and Science Classes*. http://hi-ce.org/hiceoffice/papers/papers/impact/index.html

Sun, S. (2019). Effects of Project-Based Learning in Visual Arts Education: A Meta-Analysis. *Journal of Educational Technology Development and Exchange, 12*(2), 73-89.

Sünbül, A. M. (2000). Yaratıcılık ve sınıfta yaratıcılığın geliştirilmesi. *S.Ü. Eğitim Fakültesi Dergisi, 10*, 82-94.

Sweeney, S. T., & Ingram, T. (2001). Student-Centered Learning in Higher Education. *International Journal of Teaching and Learning in Higher Education, 13*(2), 179-185.

Taylor, P. G. (2013). Pedagogy for a Changing World: Classroom Strategies for Student-Centered Learning. Routledge.

Thomas, J. W. (2000). *A review of research on project-based learning.* http://www.autodesk.com/foundation.

Thompson, B. L. (2015). *Artful Research: Researching the Arts and Culture Phenomena.* Emerald Group Publishing.

Tillman, D. A. (2012). *The effectiveness of project-based learning in the art classroom: A case study.* University of Georgia.

Tomljenovic, Z., & Vorkapic, S. T. (2020). Constructivism in Visual Arts Classes. *Center for Educational Policy Studies Journal, 10*(4), 13-32.

Valero Haro, A, Noroozi, O., Biemans, H. J. A., & Mulder, M. (2022). Argumentation Competence: Students' argumentation knowledge, behavior and attitude and their relationships with domain-specific knowledge acquisition. *Journal of Constructivist Psychology, 35*(1),123-145.

Valero Haro, A., Noroozi, O., Biemans, H.J.A., & Mulder, M. (2019a). First-and second-order scaffolding of argumentation competence and domain-specific knowledge acquisition: a systematic review. *Technology, Pedagogy and Education, 28*(3), 329-345.

Valero Haro, A., Noroozi, O., Biemans, H.J.A., & Mulder, M. (2019b). The effects of an online learning environment with worked examples and peer feedback on students' argumentative essay writing and domain-specific knowledge acquisition in the field of biotechnology. *Journal of Biological Education, 53*(4), 390-398. https://doi.org/10.1080/00219266.2018.1472132.

Yağışan, N., Sünbül, A.M. &. Yücalan, Ö.B. (2007). Eğitim Fakültesi, Güzel Sanatlar ve diğer bölüm öğrencilerinin Benlik İmgesi ve Denetim Odaklarının Karşılaştırılması. *Selçuk Üniversitesi, Sosyal Bilimler Enstitüsü Dergisi, 1*(22) 243-262.

Yalçın, B. (2020). The Effect of Project-Based Learning Approach on Student Motivation in Visual Arts Classes. *Journal of Education and Practice, 11*(2), 60-70. https://doi.org/10.7176/JEP/11-2-07

Yanal, S. (2019). *Türk ve Suriyeli ortaokul öğrencilerinin Görsel Sanatlar Dersi kazanımları, tutumları ve akademik benlik kavramlarının incelenmesi.* Yüksek Lisans Tezi, Necmettin Erbakan Üniversitesi, Konya.

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