

Game-Based Learning, Collaborative Learning, and Peer Assessment In The Photography Department

ABSTRACT

The aim of the current study is to explore the attitudes of photography department students toward Game-Oriented Learning, Peer Assessment, and Collaborative Learning and the effects of Game-Oriented Learning, Peer Assessment, and Collaborative Learning on their learning. Participants are (N:23) students of the Faculty of Fine Arts Photography Department. The current research adopted a mixed method (qualitative and quantitative) design with two groups; Experimental and Control. The treatment lasted for 7 weeks. The experimental group received treatment of Game-Based Learning, Collaborative Learning, and Peer Assessment with the help of Kahoot Quizzes, Word Puzzles, Board Games, Peer Evaluation, Research Projects, and Presentation Tasks whereas the control group received routine teaching procedures. Data collection tools are; Research Projects, Research Project Presentation Scores, and Semi-structured Interviews. Quantitative data is analyzed through the Independent Sample T-test, Kolmogorov-Smirnova Test, and Shapiro-Wilk Test, and Qualitative data is analyzed via Content Analysis by creating codes and themes. As the study findings of the current research showed, the experimental group that received the treatment outscored the comparison group. The current research is hoped to contribute to the existing knowledge of Peer Assessment / Feedback, Game-based learning, Gamification, and Collaborative learning, especially in photography education along with the practical applications in the field of photography.

Keywords: Collaborative Learning, Game-based Learning, Peer Assessment, Photography Education

INTRODUCTION

As Rand (2015) mentioned "teaching is a learning experience for the artist." which means that being a photo educator is all about inspiration, discovery, expression, and growth. There are numerous causes for why some photographers feel driven to teach. In order for pupils to have the chance to develop into knowledgeable photographers, teachers are the motivating force behind encouraging them to take creative risks in their image-making. It makes sense for educators to want to spark students' curiosity and encourage them to ask probing questions that will lead to rewarding experiences with image-making (as cited in Horner, 2016).

Teaching photography is an interesting and rewarding career, particularly when the student completely grasps the material and realizes that the student has the power and motivation to discover and educate themselves (Fiander, 2015, as cited in Horner, 2016). These incentives are among the motivation that photo educators ought to share with students as well as a significant photography education that might have a permanent impact on students. Some teachers are driven by a desire to improve as educators so as to establish a connection and help their students in a more effective way while others desire to return the favor of kind, outstanding instructors whose mentorships had a profoundly positive influence on their lives (Joslin, 2014 as cited in Horner, 2016).

In every arts education program, assessment is needed to know whether the learner has achieved the goals of the program. Evaluation is an important process that will contribute to the mental, emotional, and social development of the student. Because through evaluation, the intellectual dimension of the art activity is activated and the learner can develop new thinking and application techniques by progressing a little more each time. Başbuğ and Başbuğ (2016) attempted to review the visual arts education within the prepared program, to reveal the aspects that may fail, and to examine the approaches of the educators to the lesson and their expectations from the students. It is to make the lesson richer and more functional by developing technological approaches in order to make the lesson better understood later on. There are various techniques that can be used to evaluate students' artistic learning in visual arts education. However, each assessment technique measures different dimensions of artistic learning. Teachers need to know these differences in order to choose the appropriate techniques (Horner, 2016).

Hence, in this study, the characteristics, scope, application, and evaluation of alternative assessment techniques of Game-Oriented Learning, Peer Assessment, and Collaborative Learning in evaluating the artistic learning of the photography student are emphasized. Thus, it is thought that it will provide a new perspective to art teachers in determining real learning situations and deficiencies in the photography department as well as in the visual arts education.

Murat Han Er¹ 

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¹ Assist. Prof. Dr., Atatürk University, Faculty of Fine Arts, Department of Photography, Erzurum, Türkiye

LITERATURE REVIEW

Assessing Photography Students

The methods used in the education and training process are one of the most effective factors in gaining knowledge, skills, and attitudes. Teachers should be able to break away from traditional teaching methods at school and adopt contemporary teaching methods that students learn by doing. Thus, it is seen that the student's being at the center of the reform movements in education and training, the teacher's role as a guide in this process, and the student's use of scientific process skills have become the most important goals. In this context, it is inevitable for the teacher to use teaching methods and techniques in which the student is at the center, which is described as contemporary teaching methods (Timur and İmer 2012). There are many different types of assessment tools within formative assessment while assessing photography students such as discussions, self-peer assessment, quizzes, projects, assignments, games, critiques, presentations, papers, spontaneous quizzes, and so on. These non-traditional and formal assessment methods provide many benefits for students specifically in terms of promoting their learning and motivating them. However, certain types of challenges might arise in the process of administering "The most difficult thing to evaluate among the fields of study in art education is the product in applied studies. When the student is asked to transform his feelings, thoughts, and images into an art form, the result is also expected to be evaluated (Kırıçoğlu, 2002). However, although the product evaluation scale seems to be a result-oriented scale, it is also a part of the process evaluation. Because of this fact formative assessment tools are preferred because they guarantee a student's memory of the material, their level of comprehension, and their capacity to use it to solve problems and exercise critical thinking and enhance learning (Shute & Kim, 2013).

A formative evaluation occurs when a photographer assesses the images. It is a summative evaluation when a consumer rates the same image. Thus, "Summative assessment, or a judgment that incorporates all of the available data up to a certain point, is the result of the assessment process. At the time of the judgment, this point is considered as a fact " (Taras, 2005). These mentioned assessment processes evaluate the course's long-term learning objectives and are typically higher stakes than the formative testing options. These resources could appear as a test, extensive research effort, photographic collection, or online academic portfolio.

These evaluation tools demonstrate the level of photography expertise, technical proficiency, and intellectual development that students had attained by the end of the course. They should also assess the student's abilities and the tasks they can successfully complete as a result of their knowledge. Students should, for instance, be able to regularly take accurately exposed pictures in a range of lighting conditions. The methods that can be applied in the field of Visual Art activities can be listed as follows (Kırıçoğlu, 2009):

- ✓ Lecture Method: This method is used to make explanations about the subject, or to indicate how the application will be made before the application, and which materials will be used.
- ✓ Question-Answer Method: This method allows the student to think, question and analyze the work.
- ✓ Interactive Question and Answer Method: This method also allows students to give separate answers to the questions asked in interaction with each other, especially in the study of artworks.
- ✓ Problem-Solving Method: It is one of the most effective methods in every field of art, is especially effective in parts such as design, application, putting out work.
- ✓ Demonstration Method: In the Art Education process, this is an effective method for showing visual examples for a better understanding of the subject, and showing how the application and technique will be done.
- ✓ Gamification Method: This method, which enables students to learn while having fun, is applied in all areas of art education such as practice, criticism, Art History, and Aesthetics.
- ✓ Observation and Investigation Method: With this method, which includes taking students to museums, galleries, and environmental studies in order to gain first-hand experience with art, it is ensured that the student establishes a one-to-one relationship with the works, such as the texture, paint thickness, brush strokes, color, size, form, etc.
- ✓ Cooperative Learning Method: It enables students to research information about a theme or a work of art, to associate it with different subjects, and to learn by communicating with each other.

Taking the above information into consideration, Carless (2003) proposed the structure of a well designed assessment should include; type of assessment which fosters cognitive engagement, active participant learners, emphasis on success and a performance, a meaningful cycle of revision and follow-up, and assessment literacy. Additionally, these types of assessments include crucial details on instructional strategies that can be applied to make changes to a course in order to improve its efficacy. According to information stated above, snapshots can also act as alerts, telling teachers that their students may require more opportunities to learn through guidance and necessary feedback. For pupils to be able to correct mistakes or misconceptions, formative evaluation feedback must be given promptly. Students who struggled to retain the information can still learn by returning and presenting the material

from a fresh angle. New knowledge can then be effectively added to and integrated with existing knowledge in this way. Similarly, according to Zimmerman (2011) the parts of the formative process in an art class; are written research, reflection papers, observation records, examinations on instruments (studies), corrections made in line with feedback, sketches in which ideas are developed, and alternative solution suggestions. In fact, they bear the traces of the creative process that constitutes the difficult side of assessment in visual arts but also warn the teacher about the Observing the Learner, Evaluation and Assessment Methods of Visual Arts Teachers where and how to support the development. Zimmerman, transform formative in the process about; 1) a task, 2) the process of a task, 3) self-evaluation, and 4) the student as an individual. These feedbacks given in the process are continuous and therefore meet the student's information needs. Formative assessment aims to continuously check students' understanding in the process of educational activities and to improve teaching with learning-supportive feedback. This approach has been included in the art education literature for a long time as a process or pre-assessment (Beattie, 1997; Hurwitz and Day, 1995; Wilson, 1971; Zimmerman, 1997).

The constructivist theory has also added a perspective that makes subjective processes such as the inclusion of multiple perspectives, collaborative exploration, and student self-analysis more observable to the art education evaluation processes. In this context, besides summative assessment, the importance of formative assessment approaches has increased (Ministry of National Education [MEB], 2020). Keeping this in mind, (Powers, Freedman, & Pitner, 2012) emphasize the importance of collaborative assessment strategies embedded in the learning process that will allow social interaction. Thus, visual arts teachers are expected to develop expertise in assessment and evaluation as an element of their professional competence. The understanding of measurement and evaluation in visual arts education should be proportional to the competencies of teachers in the curriculum and teaching (Özsoy, 2020). Regarding constructivist theory, alternative assessment tools such as games, puzzles, diaries, self-assessments, peer assessments, group discussions, performance assessments, and portfolios are believed to foster learning. These assessment and evaluation techniques, which emerged in the constructivist approach, gave teachers roles such as organizing, designing, and directing the environment (Mamur 2009). With the help of this feedback, the perception and critical thinking abilities of the individual are developing with the introduction of new models into art education with technological developments. Art, like other disciplines, is inspired by technological and sociocultural events and blends it into art education according to its time (Tekin Karagöz, & Mamur, 2022)

On the other hand, some challenges and difficulties arise in terms of photography teachers' assessment literacy. Dilmaç (2020) researched the self-efficacy beliefs of visual arts teachers in using alternative Visual Arts Teachers' Student Monitoring, Lesson Assessment, and Evaluation Approaches assessment tools and concluded that the teachers in general consider themselves insufficient in assessment. Similarly, a study conducted by Mamur (2009) on fine arts high schools revealed that teachers consider measurement and evaluation important in terms of supporting student development, but the research showed that the methods used by teachers do not allow for more realistic and detailed monitoring of the student and the program and making decisions. In these studies, an important part of visual arts teachers shows that they are aware of the importance of measurement and evaluation in their lessons for a good education, but they also accept that this subject is an underdeveloped and underdeveloped field in arts education. Considering the degree of importance given to art lessons by students, parents, and some teachers and education administrators in the educational environment of our country, it is clear that the importance of measurement and evaluation in the art should be better understood (Özsoy, 2020).

Additionally, the study by Özsoy and Mamur (2022) examined how visual arts instructors perceive the measuring and evaluation procedure. According to the study's findings, the majority of teachers consider assessment and evaluation to be crucial components of their lesson plans. Both process-based formative assessment methods and comprehensive assessment methods are valued by teachers. However, issues with resources or access to materials have a negative impact on the course's content and evaluation procedure. The criterion-based evaluation technique with checklists is the evaluation method that teachers utilize most frequently in the context of process and product. Immediate, formative feedback that is focused on continual improvement is the process' main methodology. However, there are a number of evaluation-related challenges because of the interpretive and creative nature of art. Their struggles are greatly influenced by certain social assumptions and expectations that art instruction should only be provided to gifted students and not as a part of regular education. These demands restrict teachers from using reliable and valid methods of assessment and evaluation.

Hence in order to avoid these problems regarding underdeveloped fields in arts education qualified and collaborative learning is needed. What is meant by qualified learning is that the learning is integrated and deep, that is, enabling it to be transferred to the individual in new situations and practices within different contexts. In the learning process of teachers and students of this quality, an environment should be prepared in a way that will make their learning meaningful. For an effective art education, it can be ensured that the individual can gain a new perspective by enabling the more effective use of technology in applied lessons (Buyurgan & Demirel, 2022, p.589). Similarly, the "Collaborative Learning" model, which is a structured group work, was handled in terms of visual arts education, and

the application of the model, its effects on students, and its necessity were tried to be examined and evaluated (Mamur, 2011).

The concept of alternative assessment is used to describe tools other than measurement tools that are not used in traditional assessments (Çepni 2006). With these assessment techniques, which make it easier to have an idea about whether learners have learned by collecting samples at different times from their learning, it is possible to include multiple assessments in the education process (Arter, 1995). In addition to these, alternative assessment and evaluation techniques make the student do applications for using that information rather than asking the student for information (Eronat 2006).

Course Design of the Photography Department

Making a thorough plan for how to successfully deliver a high-quality photographic education to students is the fundamental goal of a course design. Hence, students ought to be provided with certain types of subject areas, and teaching methods of photography and technology (Greene, 2015, as cited in Horner, 2016). Similarly, as Ryan and Deci (2009) stated there are several tools to deliver and present the course content. The instructor, acting in the role of curator, must gather the primary sources that will most effectively convey the knowledge required to aid students in comprehending and learning the concepts covered in the classes. Additionally, it lengthens their attention span and fosters intrinsic motivation, which is another tactic discovered through game theory and educational psychology studies. To provide an example, a photography instructor could offer pupils a variety of picture projects, exam questions, paper ideas, subjects, photographers to explore, and image editing options. Here are the examples of tools that can be used in photography classes; online conversation and in-class group projects, Peer-learning, Games, team- or group-building, exercises that foster teamwork Scavenger hunts, competitions, and Demonstrations, videos of short lectures partner critiques and group feedback, Self-critiques, Jury-evaluated exhibition entries, Exhibiting, Note-taking, Minutes of meetings, written articles, outlines, study initiatives, reciting out loud, Journals, lists of words to know Backchanneling, Sketchbooks, projects and tasks that use photos, Book-making, cross-disciplinary activity, creation of websites, Portfolios (both printed and online), Posters, understanding contracts, media presentations, Role-playing, Practicing and drilling, assessments, both formative and summative Rubrics, testing, and feedback Problem-solving, Brainstorming, Mind-mapping, inquiry, asking questions Peer-evaluation, by actively listening to and interrogating visitors, excursions to the field, internships, Volunteering, videos made by students collective projects, projects using service-learning serving the community tests, quizzes, Researched by students study guides, tickets to leave, Storytelling, Awards (badges or other), Praising, Mentoring (Horner, 2016). All in all, these above-mentioned photo course practices effectively work and take place in the photography department curriculum.

Collaborative Learning

Learning photography in a setting that encourages cooperation, mutual trust, and appreciation rather than from the individual student's photographic act. Students benefit from this collaborative mindset. Similarly, Photo-educator Werthmann (2015) adds, "Students certainly learn from each other as well, even though I assume that they learn from my drawings and actions when discussing assignment objectives. They observe varied approaches to problem-solving, vocal and express various learning styles, and commiserate when they are perplexed, but eventually they can gain comprehension and retention through it all (as cited in Horner, 2016). In addition to these, significant improvements in achievement, retention in the classroom, critical thinking abilities, enhanced cooperation abilities, and a greater sense of community between students and instructors, according to Hill (1996), there are some examples of the benefits of cooperative learning. As can be seen above these instructors claim that learners learn from collaborative actions and tasks since their experiences assist each other in a positive way.

Cooperative or Collaborative learning is a learning model in which students work in small groups to work together to achieve their common goals. The purpose of this method is to maximize students' own knowledge and learning of other members of the group. In fact, the main function of education is to make groups that were heterogeneous at the beginning homogeneous (Slavin & Oickle, 1981, Açıkgöz, 1992: 3, MacGregor & Smith, 1992; Johnson & Johnson, 1994, Kagan, 1998; Öncül, 2000: 623; Dotson, 2001, Demirel, 2006:219). Cooperative learning is one of the largest and most productive areas of educational theory, research, and practice (Johnson, Johnson, 1994).

In cooperative learning, every member of the group is considered to achieve the goals with active participation. The activities should be designed to take into account working with the group and the participation of each member of the group. Of course, not every activity has to be worked on in groups all the time. Working with a group may vary according to the essence of the subject (Güven, 2004). There are several studies that explored the effectiveness and the significance of collaborative learning. To provide an example, Yılmaz's (2007) research on the "Collaborative Learning" model, was handled in terms of visual arts education, and the application of the model, its effects on students, and its necessity were tried to be examined and evaluated. Besides, a study by Unalan (2008) also explored the administration of collaborative learning as well as its effect on collaborative learning in art education training by

using the model of pre-test and post-test control groups. As the findings of the study suggest, the collaborative learning method in visual art education is found to be more efficient compared to traditional methods.

It should be also noted that how to form collaborative groups is a crucial phenomenon in collaborative learning, especially in the photography department. The best way of forming students is to become aware of students who have prior knowledge or experience in photography and who are novices. The reason behind this idea is to enable students to learn from their peers collaboratively and bring about excellent photography (Keniston, 2015, as cited in Horner, 2016). The capacity of a team's members to collaborate and assist one another determines the team's strength. High performers will gain from mentoring those who are having difficulty. Students ought to be held accountable to one another and the instructor in order to ensure that they carry out the duties outlined in their positions. Additionally, regular peer reviews will guarantee that sense of accountability. Therefore, photography lessons should be full of learning methods and challenges (photo assignments) in order to promote effective and collaborative learning (Ross & Smyth, 1995).

There are several studies in literature regarding collaborative and cooperative learning specifically in the field of Visual Art. The research by Aydın and Alakuş (2009) explored the impact of teaching visual arts through cooperative learning on students' academic success to determine the effect of collaborative learning activities on students' success and permanence of what has been learned in Visual Arts courses. The research was carried out using the pretest-posttest control group model of the experimental design. From the findings, it is observed that the experimental group in which the Cooperative Learning method was administered outscored the control group in which traditional teaching was administered. In addition, it is seen that the scores of the lesson taught with this method in the experimental group to ensure the permanence of the learned were higher than the control group in which traditional teaching methods were applied.

In addition to this, a study by Tarlakazan (2011) was conducted to test the effectiveness of the Collaborative Teaching Method in the Visual Arts course with two groups as the control and experimental group. While Cooperative Teaching Method activities were applied in the experimental group, traditional teaching method activities related to the same unit were used in the control group. During the Cooperative Teaching Method activities, it was observed that the students achieved the gains expected from the practice, such as cooperation, sharing, and aesthetic thinking. According to the findings of this search, it can be concluded that using a collaborative learning approach is more beneficial than using more conventional techniques in the teaching of visual arts.

Motivation in Photography and Motivating Photography Students

Motivation is the core element of photography since motivation is the drive for both photography students and photographers. It will be impossible for photography students to produce better quality works without any inspiration and motivation. Thus, photography educators ought to follow certain procedures in order to motivate them. Students that are more enthusiastic and committed to their study and photographic practice will take an interest in their photography classes and learning process. Hence, learners become more independent and lifelong learners in the field of photography. It is also important to mention here that while motivating photography students photography instructors need to provide some positive reinforcement in which positive and ongoing feedback/assessment is involved (Sibley & Ostafichuk, 2014). It can then be said that a photography educator should be the one who provokes the attention of the students in order to increase their motivation. These methods can boost and activate students' both intrinsic and extrinsic motivation. In this way, photographic education may be enjoyable to learners and help them feel pleasure or satisfaction and each student consciously decides to become an engaged learner during the process.

A creative activity that is naturally engaging for most individuals would be photography. The use of games, quizzes, teamwork, peer learning, critiques, field trips, guest speakers, reward badges, kinesthetic movement, competition, mentoring, assignments and e-portfolios are just a few of the strategies covered here to boost that motivation. By igniting the sense of internal and extrinsic drive in the picture student, these techniques can be successfully used to support a high-performing classroom on a variety of levels. Additionally, the following techniques have been proven to successfully engage and motivate students: 1. Learning Student Names (Allday & Pakurar, 2007), 2. No opt out (Lemov, 2010), 3. Change of scenery, (TeachThought Staff, 2012), 4. Metaphors, 5. Maintain contact, 6. Offer breaks, 7. Feedback, 8. Rewards 9. Challenges: (Roderick & Engel, 2001), (McInerney, 2013), 10. Share, 11. Visits, 12. Entertainment, (Opitz & Ford, 2014). Thus, it might occasionally be helpful for students to relate to the sensation of inspiration by experiencing directly from other photographers about what motivates them. Students who hear about inspiration might recognize and relate to its feelings. As Tartakovsky (2012) states "The way the light falls on a leaf, the way your eyes sparkle in the sunlight, the way the shadows dance on the grass".

Game-Based Learning / Gamification

There are several definitions of Game-Based Learning and Gamification in the field of education. According to Spencer (2015), gamification is a crucial element in learning since it is an efficient method to promote learners'

motivation and success (Rouse, 2013). A similar definition is made by Burke, (2014) "Gamification is the use of game mechanics and experience design to digitally engage and motivate people to achieve their goals". Moreover, improvements in memory and attention span, greater problem-solving abilities, and an eagerness to explore and learn are all advantages of game-based learning (Dewar, 2014). According to one study, teachers can successfully improve both engagement and achievement in the classroom environment by using gamification wisely (Stott & Neustaedt, 2013). While revealing gamification can favorably boost and promote student motivation, other studies came to similar conclusions (Sailer, Hense, Mandl, & Klevers, 2013). Participating in educational games also positively affects students' cognitive and emotional well-being (Lee & Hammer, 2011).

Gamification or Game-Based Learning consists of several different types of activities and types such as role-playing, story telling, critical thinking, and innovative methods to problem-solving in which learners are actively participating and engaging with learning materials. Many photography lessons are mostly very appropriate for the implementation of these theories and game-based learning. The mix of designing content that is inherently engaging, cognitively stimulating, and behavioral tactics that present stimuli in a methodical fashion with expectations and incentives is what makes gamifying a course function well (Kosanic, 2015, as cited in Horner, 2016). The theory of game-based learning aligns well with the field of photography since similar to gamers, photographers have a clear objective in mind and are willing to go through time-consuming but fun methods to attain it: the reward of taking successful photos.

The game, in which the learner actively participates, is of great importance in education. The student learns the knowledge, skills, and behaviors that he should acquire in his life spontaneously through the game. With the game, the personality of the student is shaped and his abilities are directed. Human relations, helping each other, and winning and losing are comprehended through games (Çoban, 2006). Similarly, in the game technique, the subjects can be turned into activities that students can enjoy, and the level of interest of the students in the lessons can be increased. Thanks to this technique, the teaching of new concepts and the retention time of the taught ones can be extended (Aykaç, 2005).

To date, data from several studies suggest game-based learning, and gamification presents plenty of benefits for learners. To provide an example, Buyurgan, and Genç's (2018) study presented some kind of suggestions that will be developed depending on the data to be obtained by using the educational game method from the museums, unlike the course activities in the program in the Visual Arts course. Within the scope of the research, the activities included in the Visual Arts Lesson program were applied to the control group students in the classroom; In addition to these activities for the experimental group students, the students were taken to Museums and the museum activities based on the games developed for the students were implemented in the museum. From the data obtained as a result of the research, it was observed that the game-based museum activities were effective in increasing the achievement and attitude levels of the experimental group students towards the Visual Arts Lesson, in which they were applied in the Ankara State Painting and Sculpture Museum. In addition to these, a study by Suharno, Suherdi and Gunawan (2023) explored the effects of Gamified EFL listening course as well as the motivation aspect. Similarly Assapun & Thummaphan (2023) investigated the effectiveness board game based learning fostering problem solving competency and found a positive high engagement.

Taking all this information and literature reviewed into account previously mentioned game practices; The Quiz-Bowl Game, Board Games, Word Games: Cross-Word Puzzle can be embedded into the curriculum design of the photography course and department since learners of the photography department are willing to illustrate their abilities.

Peer Feedback / Assessment

Peer feedback and assessment play a fundamental role in photography education since each product needs to be assessed and reflected upon by peers so as to create better-quality work. The educator receives concrete evidence of learning and continuous technical, artistic, and conceptual progress when students exhibit their photography projects. Pictures serve as visual representations of both fresh learning and all prior learning. Every art assignment generates a collection of artifacts, either digital files or printed materials, that instructors can evaluate and grade using the same criteria that is given to students before they begin an assigned challenge. Using critiques, teachers can also provide students with constructive criticism about how they feel about their work as well as specific recommendations for how to make it better.

For a peer assessment to be efficient, learners ought to be aware of assessing. Necessary rubrics need to be provided by teachers so the learners can assess or evaluate by taking the criteria and guidelines into consideration in an effective and detailed way. Above mentioned criteria and rubrics are closely aligned with the theory of a team-based learning process as well that foster critical thinking and involvement in the context of photography. Lastly, in addition, these responding photographs on an online platform such as (Google Photos, Flickr, 500px, photo.net, or Photobucket) can also be used as an in-class event as part of both Peer assessment/feedback and collaborative learning (Horner, 2016). Similarly, homework, research, project, report prepared by students' friends work

evaluation. Peer assessment provides feedback to the teacher about students' development and proficiency levels (MEB 2006). Aldağ and Gürpınar (2008) state that peer assessment studies enable the development of collaborative working skills in the long run and teach them to look critically at newly learned information. While explaining their thoughts through peer assessment, students have to take into account different opinions. This can be especially effective in seeing the creative process and diversity in art. However, contradictory and biased behaviors can be seen in peer evaluations.

There are several studies on this subject, a research by Ersöz and Şad (2018) explored the effectiveness of Facebook as a Peer Assessment Platform in the context of an Art Teacher Education. As the findings of the study suggest using Facebook as part of the Peer Assessment is found to be effective. A similar study is conducted by Dikici (2009) in which administrating of Digital Portfolios with Self and Peer Assessment in Art Education is investigated. Taking all this information into consideration this research extends and enhances our understanding and knowledge about Game-Based Learning, Collaborative Learning, and Peer Assessment in the context of the Photography Department in Higher education since this research has practical implications and there are a limited number of studies regarding Game-Based Learning, Collaborative Learning, and Peer Assessment in the context of the Photography Department. In addition to these taken together, this research is expected to serve as a base for future research by filling the gap in Photography Education including Game-Based Learning, Collaborative Learning, and Peer Assessment.

Overall, numerous studies have attempted to explore the themes of Peer Assessment / Feedback, Game-based learning, Gamification, and Collaborative learning in the context of Visual Arts, however, there is no single study that explored the effectiveness of these methods in the field of photography specifically in higher education. Therefore, the current research is hoped to contribute to the existing knowledge of Peer Assessment / Feedback, Game-based learning, Gamification, and Collaborative learning, especially in photography education along with the practical applications in the field of photography.

METHODOLOGY

Research Questions

There are two research questions of the current study, which are;

RQ1) What is the effect of Game-Oriented Learning, Peer Assessment, and Collaborative Learning on photography department students' Learning?

RQ2) What are the attitudes of photography department students towards Game-Oriented Learning, Peer Assessment, and Collaborative Learning?

Context and the Participants

Participants are the students of the Photography Department at the Faculty of Fine Arts, Atatürk University. They are second graders who take courses in Turkish Photography History and first graders who take History of Photography courses. There are two groups in the current study as clear above; the experimental group and the control group. The participants of experimental group are the students of first graders who take the course of History of Photography and control group are the students of second graders who take course of Turkish Photography. Informed consent form was taken from the participants. In addition to this, the current research complies with research publishing ethics with the Atatürk University Scientific Research and Publication Ethics Committee 17.11.2022.

Procedure and the Data Tools

Data collection procedures followed a mixed-method design and lasted for 7 weeks. Within this period students are required to follow the procedure planned by the instructor. There are two groups in the study, which are; experimental and comparison groups. The experimental group went through a treatment process consisting of "Game-Based Learning, Collaborative Learning, and Peer Assessment as well as Research Projects, Presentation Tasks, Kahoot Quizzes, and Word Puzzles" whereas the comparison group went through a routine procedure including Research Projects and Research Projects Presentation solely. At the end of the 7 weeks, students' scores from Research Project Presentation and Research Projects were compared both for the experimental and comparison group in order to measure the effectiveness of the treatment. Besides that semi-structured interview was administered to some learners from the experimental group in order to analyze their attitudes of Photography Department Students towards Game-Oriented Learning, Peer Assessment, and Collaborative Learning. As mentioned above there are several sources of lesson procedures in the current study; Research Projects, Presentation Tasks, Kahoot Quizzes, Peer Assessments, and Word Puzzles, Board Games. Here are brief descriptions of the data tools and the course tasks.

Course Tasks

Research Project: Students are expected to prepare the research project within the scope of the History of Turkish Photography and the History of Photography course as a group work from the themes the instructor prepared (See Appendix A).

Group Presentation Tasks: Students are expected to prepare a group presentation about the research project within the scope of the History of a Photography course and present it in the classroom as group work (See Appendix B).

Peer Assessment: Students are expected to assess, evaluate and reflect upon their peer's "Research Project and Presentation Tasks" within the scope of the History of Photography course. Learners are required to follow the guidelines of 'Peer Evaluation Form' shared by the instructor while assessing their peer's work (See Appendix C).

Kahoot Quizzes: Kahoot quizzes are implemented twice a week in order to evaluate student's progress and help them learn the course details in an entertaining way within the scope of game-based learning (See Appendix D).

Word Puzzles: Word puzzles are administered at the end of every week in order to evaluate student's progress and help them learn the course-related vocabulary in an entertaining way within the scope of game-based learning (See Appendix E).

Board Games: Board games are administered in the classroom at the end of every week in order to increase the motivation of students, enhance their learning and revise the chapters (See Appendix F).

Overall, below is the table for "Weekly Course Schedule for Control and Experimental Group" in which weekly procedures for both Control and Experimental Group are shown.

Table 1: Weekly Course Schedule for Control and Experimental Group

	Control Group	Experimental Group
Week 1	Routine Procedure / PPT Course Material	PPT / Course Material / Word Puzzles
Week 2	Routine Procedure / PPT Course Material	PPT / Course Material / Board Games - Word Puzzles
Week 3	Routine Procedure / PPT Course Material	PPT / Course Material / Kahoot Quizzes - Word Puzzles
Week 4	<i>Research Project</i>	PPT / Course Material / <i>Research Project</i> - Word Puzzles
Week 5	Routine Procedure / PPT Course Material	PPT / Course Material / Group Presentation / Peer Assessment
Week 6	Routine Procedure / PPT Course Material	PPT / Course Material / Word Puzzles
Week 7	PPT / Course Material / <i>Research Project Presentation</i>	PPT / Course Material <i>Research Project Presentation</i>

Data Tools

Data collection tools are Research Projects, Research Project Presentations, and Semi-Structured Interviews for the current study.

Research Project: Students are expected to prepare the research project within the scope of the History of Turkish Photography and the History of Photography course as a group work from the themes the instructor prepared. Both experimental and comparison groups are required to prepare the text.

Research Project Presentation: Students are expected to prepare the research project presentation within the scope of the History of Turkish Photography and the History of Photography course from the themes the instructor prepared. Both experimental and comparison groups are required to prepare the project and present it in the classroom. The instructor grades the oral presentation with the 'Oral Presentation Rubric' (See Appendix G).

Semi-Structured Interview: The interview is conducted with the 'Experimental Group' in order to explore more about their attitudes toward Game-Oriented Learning, Peer Assessment, and Collaborative Learning on their learning. The interview questions included items regarding the effect of Game-Oriented Learning, Peer Assessment, and Cooperative Learning on student's learning, attitudes toward Game-Oriented Learning, Peer Assessment, and Collaborative Learning, attitudes towards the course in general as well as the current procedure of the course (See Appendix I).

As for the reliability of the Semi Structured Interview piloting the process of the interview, inter-rater reliability for coding the responses, training of the interviewers were administered (Silverman, 1993). In addition to these Kappa statistics are performed to determine consistency between two independent coders of the data (Landis & Koch, 1977)

Table 2: Kappa Statistical Test Symmetric Measures

	Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Measure of Kappa Agreement	,783	,132	8,581	,000
N of Valid Cases	10			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Kappa statistical test was run to test the reliability between two coders of data. The inter-coder reliability for 10 codes was found to be Kappa = ,78(Sig= 0.000; $p < 0.001$) and which is a significant result and considered to be a satisfactory agreement between two coders. a (Landis & Koch, 1977). In order to increase and establish credibility, many techniques were utilized such as triangulation, and peer debriefing. For triangulation, a multi-method approach for the data collection (Research Project and Research Project Presentation Scores, and Interview) were administered. Peer debriefing (examination) was also done for the purpose of analytic triangulation. Thus, a peer debriefer, an instructor with a Ph.D. degree in the field of Photography Department, was selected to maintain the degree of trust, relations of authority, and confidentiality between the researcher and peer de-briefer (coders).

Data Analysis

There are two types of data analysis in the current study. The quantitative data for the current study is analyzed through the Kolmogorov-Smirnova Test, and Shapiro-Wilk Test for normality tests, and the Independent T-test for the scores of the students. The qualitative data is analyzed via Content Analysis by creating codes and themes. In addition to this, the informed consent form was taken from the participants (See Appendix J)

FINDINGS AND DISCUSSION

Findings for Research Question Number

As for findings for research question number 1 test of normality was calculated in order to show if there was a normal distribution between the comparison and experimental groups. Table 3 below shows the result of the test of normality.

Table 3: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Sta.	df	Sig.	Stat.	df	Sig.
Research Project	,152	23	,183	,938	23	,161
Presentation	,138	23	,200*	,964	23	,556

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Tests of normality revealed that data has a normal distribution ($p > ,05$) which is why parametric tests (independent samples t-test) were used for data analysis. Table 4 shows the descriptive (group) statistics of both the comparison and control groups.

Table 4: Group Statistic T-Test Result

Group Statistics	TREATMENT				
		N	Mean	Std. Deviation	Std. Error Mean
Research Project	EXP	15	16,87	1,598	,413
	CONTR	8	11,25	2,252	,796
Presentation	EXP	15	15,67	2,498	,645
	CONTR	8	11,50	2,878	1,018

According to table 4 the descriptive statistic table shows that while the mean of the scores of the experimental group in Research Project is $M=16.87$ and Presentation is $M= 15,67$, the mean score of the comparison group in Research Project is $M=11.25$ and Presentation is $M= 11,50$. In other words, the mean of the scores for the experimental group is higher than that of the comparison group. Table 5 below indicates the results of the Independent Sample Test which shows the difference between the scores of the experimental and control groups.

Table 5: Independent Sample Test

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Research Project	Equal variances assumed	2,971	,099	6,966	1	,000	5,617	,806	3,940	7,293
	Equal variances not assumed			6,264	0,871	,000	5,617	,897	3,640	7,593
Presentation	Equal variances assumed	,591	,451	3,618	1	,002	4,167	1,152	1,772	6,562
	Equal variances not assumed			3,458	2,724	,004	4,167	1,205	1,558	6,775

Independent sample t-test results in Table 5 revealed a significant difference between the scores of experimental and control groups ($p < .05$). Therefore, the treatment affected the experimental group in a positive way at a significant level for both of the scores when compared with the control group.

Findings for Research Question Number 2

As for findings for research question number 2 themes and codes emerged by transcribing the data that came from the Semi-Structured Interview. Three themes; (1) Collaborative Learning, (2) Game Based Learning, (3) Course Procedure and 10 Codes; Code 1: Effective Learning, Code 2: Motivation, Code 3: Sharing, Code 4: Permanent Learning, Code 5: Competition, Code 6: Materials, Code 7: Practice, Code 8: Repetition, Code 9: Peer Evaluation emerged from the findings of the Semi-Structured Interview. Here are some examples from the participants' statements.

Excerpt 1: "Working together makes you learn from each other, and promote the helping process with the help of new ideas." The participant stated that the learning process becomes effective thanks to collaborative learning.

Excerpt 2: Collaborative Learning encourages me because I start comparing myself with others, especially with the successful students, in our group projects, presentations, etc." The participant clarified that collaborative learning increases motivation.

Excerpt 3: "Before I show the teacher the photos we took as part of the homework, projects given by the teacher, I get the opinion of my friends. We also have discussions, and reflect on each other's work not only in class but also outside of the class as well." The participant claimed that students share opinions as well as their work with each other.

Excerpt 4: "For example; We play Kahoot in class, this is very effective because knowledge and information stay in our mind, and we don't forget it easily since we have fun during the learning process" The participant mentioned that permanent learning occurs with the help of Game-Based Learning

Excerpt 5: "I think competition drives success because it makes you feel eager and ambitious during the course, I feel so encouraged in especially puzzles and board games." The participant focused on the importance of competition and how it promotes effective learning

Excerpt 6: "The materials, presentations, games and teaching procedure of the course that the teacher administers in 'History of Photography' make us forget that this lesson is a history based lesson and destroys our perceptions." The participant stated that the course procedure was beyond their expectations in a positive way.

Excerpt 7: "With the help of the course procedure, (the way our teacher conveys the lesson to us) we as students can make comparisons with past photography techniques and have a discussion upon the practicality of the course."

Excerpt 8: The smooth transition between the units, chapters, and topics that our instructor make helps us retrieve the previous knowledge and information we have learned. The teacher frequently asks us questions to refresh our memory. The participants stated the importance of practice since it helped their learning.

Excerpt 9: "We are giving lectures to our friends while making presentations. This presentation makes such a contribution. For example, my friends comment on my work or project and give feedback. It makes me learn better."

As the findings of the data suggest participants emphasized that learners' motivation for learning increased thanks to teamwork, and collaborative tasks. In addition to these, with the help of teamwork, and collaborative tasks effective learning and interaction among learners occur. Taken together, participants had a positive attitude towards Game-Oriented Learning, Peer Assessment, and Collaborative Learning.

DISCUSSION

The findings of the research complement those of earlier study of Mamur (2009), Özsoy (2020) and Özsoy and Mamur's (2022) in which the importance of measurement and evaluation in art education is emphasized. Similarly,

as Buyurgan & Demirel, (2022) stated for an effective art education, it can be ensured that the individual can gain a new perspective by enabling the more effective use of technology in applied lessons.

It is found that results of the current study are in line and agreement with those of earlier studies; Ünalın (2008) also explored the effectiveness of collaborative learning applications in art education training by using the model of pre-test and post-test control groups and found that the collaborative learning method in visual art education is more effective than traditional methods. Similar to these studies and the current study, the research by Alakuş and Aydın, (2009) investigated the effect of teaching visual arts through cooperative learning on students' academic success to determine the effect of collaborative learning activities on students' success in Visual Arts courses. From the findings, there was a significant difference between the experimental group in which the Cooperative Learning method was applied and the control group in which traditional teaching was applied.

All in all, these results seem to be consistent with other previous research as well as the current research since the treatment of collaborative learning, peer assessment and game based learning affected the experimental group in a positive way at a significant level. It can then be said that Game-Based Learning, Collaborative Learning, and Peer Assessment with the help of Kahoot Quizzes, World Puzzles, Board Games, Peer Evaluation, Research Projects, and Presentation Tasks had a positive impact on students' learning as well as their motivation.

CONCLUSION

Overall, the findings of this study show that the experimental group (who take the course of History of Photography) that received the treatment outscored the comparison group. The Independent sample t-test results revealed a significant difference between the scores of the experimental and control groups ($p < .05$). Therefore, the treatment of Game-Based Learning, Collaborative Learning, and Peer Assessment affected the experimental group in a positive way at a significant level for both of the scores when compared with the control group. Similarly, as the findings of the qualitative data suggest, participants emphasized that learners' motivation for learning increased thanks to teamwork, and collaborative tasks. In addition to these, with the help of teamwork, and collaborative tasks effective learning and interaction among learners occurred.

Suggestion for Further Research

More broadly, more research is needed to determine the effectiveness of Game-Based Learning, Collaborative Learning, and Peer Assessment in different contexts of the Photography Department all around the world specifically in the Turkish context as well as in higher education since a limited number of studies regarding these issues. A further study then could assess the long-term effects of Game-Based Learning, Collaborative Learning, and Peer Assessment in Photography Departments with more participants. Hence, in order to fill this gap in art education, especially in photography education more studies, and experimental investigations are needed to estimate and validate the effectiveness of Game-Based Learning, Collaborative Learning, and Peer Assessment.

Limitations

A limitation of the current research is that the experimental and comparison group courses History of Turkish Photography and the History of Photography differed from each other in a limited way however, the assessment tools (data tools; Research Projects, Research Project Presentations) were the same. It should be also noted that the themes, and the content of the both lessons were quite similar to each other since both courses include some sort of literary details, as well as historical information of photography. Keeping this mind, despite limited amount of disparities both the History of Turkish Photography and the History of Photography groups were assessed with the same tools. Regarding this, since the group courses were different, the generalizability of the result might not be applicable to other contexts. Another limitation is the number of participants due to the fact that there were a limited number of participants the results might be different if the number of the participants increase.

KAYNAKÇA

Açıkgöz, K. Ü. (1992). *İşbirlikli Öğrenme Kuram Araştırma Uygulama*, Malatya: Uğurel Matbaası.

Aldağ, H. & Gürpınar, K. (2008). "Üniversite Öğrencilerinin Sunu Becerilerini Etkileyen Faktörler" <<http://ab.org.tr/ab07/bildiri/205.doc>>

Allday, R. A., & Pakurar, K. (2007). "Effects of Teacher Greetings on Students on Task Behaviour", *Journal of Applied Behavior Analysis*, 40: 317-320.

Arter, J. A. (1995). "Portfolios for Assessment and Introduction", (ERIC Digest, ERIC-RIEO, 19950101 Database: ERIC).

Assapun, S., & Thummaphan, P. (2023). "Assessing The Effectiveness of Board Game-Based Learning for Enhancing Problem-Solving Competency of Lower Secondary Students", *International Journal of Instruction*, 16(2):511-532. <https://doi.org/10.29333/iji.2023.16228a>

- Aykaç, N. (2005). *Öğretme Ve Öğrenme Sürecinde Aktif Öğretim Yöntemleri*. Ankara: Naturel Yayınları.
- Aydın, S. Alakuş, A. O. (2009). "The Effect of Cooperative Learning on The Students' Success and Retention of the Learning in The Visual Arts Lesson", *Dicle Üniversitesi Ziya Gökalp Eğitim Fakültesi Dergisi*, 13:63-77.
- Başbuğ, F., Başbuğ Z. (2016). "Görsel Sanatlar Eğitimi Üzerine Notlar", *Akdeniz Sanat Dergisi*, 9(18):74-98
- Beattie, D. K. (1997). *Assessment in Art Education*. Davis Publications.
- Burke, B. (2014). "Gartner Redefines Gamification". blogs.gartner.com/gartner/. Web.
- Buyurgan, S. & Demirel, İ. N. (2022). "Uzaktan Eğitim Öğretim Sürecinde Uygulamalı Sanat Derslerine Yönelik Akademisyen Görüşleri", *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, 42(1):585-620. DOI: 10.17152/gefad.930885
- Carless, D. R. (2003). "Developing Formative Potential When Summative Assessment Dominates", Post RELC Conference, Chulalongkorn University, Bangkok.
- Çepni, S. (2006). *Öğretimde Plânlama ve Değerlendirme*, Ahmet Doğanay, Emin Karip (Ed.), Pegem A Yayınları, Ankara
- Çoban, B. (2006). *Ortaöğretimde ve Üniversitelerde Eğitsel Oyunlar*. Ankara: Nobel Yayın dağıtım.
- Demirel, Ö. (2006). *Kuramdan Uygulamaya Eğitimde Program Geliştirme*, Ankara: Pegem A Yayıncılık.
- Dewar, G. (2014). "The cognitive benefit of play: Effects on the learning brain", *Parenting Science*.
- Dilmaç, S. (2020). "Görsel Sanatlar Öğretmenlerinin Alternatif Değerlendirme Araçlarını Kullanabilme Özyeterlik Düzeylerinin Belirlenmesi", *Atatürk Üniversitesi Güzel Sanatlar Enstitüsü Dergisi*, 26(44):138-149. <https://doi.org/10.32547/ataunigsed.657396>
- Dikici, A. (2009). "An Application of Digital Portfolio with The Peer, Self and Instructor Assessments in Art Education", *Eurasian Journal Of Educational Research*, 36:91-108.
- Dotson, J. M. (2001). "Cooperative Learning Structures can Increase Student Achievement", <http://www.kaganonline.com/kaganclub/freearticles.html>,
- Ersöz, Y. & Şad, S. N. (2018). "Facebook As a Peer-Assessment Platform: a Case Study In Art Teacher Education Context", *International Journal of Assessment Tools in Education* 5(4):740-753. DOI: 10.21449/ijate.478277
- Eronat, A. (2006). *Öğrenme-Öğretme Sürecinde Planlama Ve Uygulama*, (Editör; Necdet Aykaç, Hasan Aydın), Ankara: Natural Kitap-Yayın
- Genç, S. & Buyurgan, S. (2018). "Oyuna Dayalı Müze Etkinliklerinin Öğrenci Erişi Ve Görsel Sanatlar Dersine Karşı Tutumları Üzerine Etkisi", *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 19(3):687-699. DOI: 10.17679/inuefd.440804
- Güven, İ. (2004). "Etkili Bir Öğretim için Öğretmenden Beklenenler", <http://yayim.meb.gov.tr/dergiler/164/guven.htm>
- Hill, S. S. (1996). "Cooperative Learning": A catalyst for change in the college classroom.
- Horner, G. (2016). *The Photography Teachers Handbook*, Taylor and Francis, ISBN: 9781138828759 PP.
- Hurwitz, A., and Day, M. (1995). *Children and their art: Methods for the elementary school*, Harcourt Brance Javanovich Publishers.
- Johnson, R. T. & Johnson, D. W. (1994). *An Overview Of Cooperative Learning*, J. Thousand, A. Villa And A. Nevin (Eds), Creativity and collaborative learning; Brookes Press, Baltimore.
- Kagan, S. (1998). "Cooperative Learning", Web, <http://www.kaganonline.com/kaganclub/freearticles.html>
- Kırıçoğlu, O. (2002). *Sanatta Eğitim; Görmek Anlamak Yaratmak*, (2. Baskı), Ankara: Pegem A. Yayınları.
- Kırıçoğlu, O. T. (2009), *Sanat Kültür Yaratıcılık Görsel Sanatlar Ve Kültür Eğitimi-Öğretimi*, Pegem Akademi, Ankara.
- Landis, J. R., & Koch, G. G. (1977). The Measurement Of Observer Agreement For Categorical Data. *Biometrics*, 159-174.
- Lee, J. J., & Hammer, J. (2011). "Gamification in Education: What, How Why Bother?", *Academic Exchange Quarterly*, 15(2):146.

- Lemov, D. (2010). "Teach Like A Champion: 49 Techniques That Put Student On The Path To College (K-12)", John Wiley & Sons.
- Macgregor, J. T. And Smith, B. L. (1992). What is Collaborative Learning, The National Center On Postsecondary Teaching, Learning, And Assessment At Pennsylvania State University.
- Mamur, N. (2009). "Anadolu Güzel Sanatlar Lisesi resim bölümü öğrencilerinin sanatsal yeterliliğini ölçme ve değerlendirmede EGD'nin (portfolyo) rolü" Doktora Tezi, Gazi Üniversitesi / Eğitim Bilimleri Enstitüsü / Güzel Sanatlar Eğitimi Ana Bilim Dalı / Resim Öğretmenliği Bilim Dalı, Ankara.
- Mamur, N. (2011). "Görsel Sanatlar Eğitimi Alan Öğretmen Adaylarının Alanlarına Yönelik Ölçme Ve Değerlendirme Araç Ve Yaklaşımlarına İlişkin Yeterlilikleri", Türk Eğitim Bilimleri Dergisi 9(3), 597-626
- MEB (2006). Ölçme ve Değerlendirme, <<http://ttkb.meb.gov.tr>>
- Millî Eğitim Bakanlığı, (2020). Okul ve Sınıf Tabanlı Değerlendirmeye Dayalı Öğretmen Kapasitesinin Güçlendirilmesi: Görsel Sanatlar Dersi Öğretmen Rehber Kitapçığı.
https://odsgm.meb.gov.tr/meb_iys_dosyalar/2020_08/26145445_Gorsel_Sanatlar.pdf
- McInerney, D. M. (2013). Educational Psychology: Constructing Learning, Pearson Higher Education AU.
- Opitz, M. F. & Ford, M. P. (2014). "Engaging Minds In The Classroom: The Surprising Power of Joy", ASCD.
- Öncül, R. (2000). Eğitim Ve Eğitim Bilimleri Sözlüğü, İstanbul: Milli Eğitim Bakanlığı Yayınları.
- Özsoy, V. (2020). "İlk ve Ortaöğretim Görsel Sanatlar Derslerinde Ölçme ve Değerlendirme Yöntemleri", Webinar, İstanbul İl Millî Eğitim Müdürlüğü, 23 Haziran
- Özsoy, V. Mamur, N. (2022). "Görsel Sanatlar Öğretmenlerinin Öğrenci İzleme, Ders Ölçme Ve Değerlendirme Yaklaşımları", Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 55(1):147-181, DOI: 10.30964/aebfd.947399, E-ISSN: 2458-8342, P-ISSN: 1301-3718
- Powers, M., D. Freedman, and R. Pitner. (2012) "From Snapshot to Civic Action: A Photovoice Facilitator's Manual." <http://bit.ly/OjCuLS>. Community-Engaged Scholarship for Health (CES4Health)
- Roderick, M. & Engel, M. (2001). "The Grasshopper and The Ant: Motivational Responses of Low Achieving Students To High-Stakes Testing", Educational Evaluation and Policy Analysis, 23(3):197-227
- Ross, John, A. & Elizabeth, S. (1995). "Differentiating Cooperative Learning To Meet The Needs Of Gifted Learners: A Case For Transformational Leadership". Journal For The Education of The Gifted, 19(1):63-82.
- Rouse, K. E. (2013). "Gamification in Science Education: The Relationship Of Educational Games To Motivation And Achievement", Dissertations. 622, <https://aquila.usm.edu/dissertations/622>
- Ryan, Richard, M. & Edward, L. Deci (2009). Promoting Self Determined School Engagement, Handbook of Motivation at School, 171-195.
- Sailer, M. et. Al. (2013). "Psychological Perspectives On Motivation Through Gamification", Interaction Design and Architecture(s) Journal, 19:18-37.
- Slavin, R. E. And Oickle E. (1981). "Effects of Cooperative Learning Teams on Student Achievement and Race Relations: Treatment By Race Interactions", Sociology of Education, 54(3):174-180.
- Shute, Valerie J., & Kim, Y. J. (2014). Formative and Stealth Assessment. In: Handbook of research on educational communications and technology. Springer, 311-321. Print.
- Sibley, J. & Peter, Obsafichuk (2014). "Getting Started With Team-Based Learning", Stylus, LLC., Print.
- Silverman, D. (1993). "Beginning Research". Interpreting Qualitative Data. Methods for Analysing Talk, Text and Interaction. Londres: Sage Publications.
- Spencer, R. (2015). "Top 10 eLearning Trends for 2015", eLearning Industry, Web
- Stott, A. & Neustaedter, C. (2013). Analysis of Gamification in Education. Surrey, BC, Canada. <http://clab.iat.sfu.ca/pubs/Stott-Gamification.pdf>
- Suharno., Suherdi, D., & Gunawan, W. (2023). "The Effects of Teaching Presence on Students' Motivation and Performance In A Long-Term Online Gamified EFL Listening Course", International Journal of Instruction, 16(2):1111-1134. <https://doi.org/10.29333/iji.2023.16259a>
- Taras, M. (2005). "Assessment-summative and formative-some theoretical reflections", British journal of Educational Studies. 53(4):466-478.

- Tarlakazan, E. (2011). “Görsel Sanatlar Dersinin İşbirlikli Öğretme Yöntemi Etkinlikleri İle Gerçekleştirilmesine İlişkin Öğrenci Görüşlerinin Değerlendirilmesi”, e-Journal of New World Sciences Academy, 6(1), Article Number: D0040, ISSN: 1306-3111
- Tartakovsky, M. (2012). “10 Creative people share what inspired them”, World of Psychology, Psychcentral.com
- Teach Thought Staff (2012). “21 Simple ideas to improve student motivation”, TeachThought.com
- Tekin Karagöz, C. & Mamur, N. (2022). “Covid-19 Salgın Sürecinde Görsel Sanatlar Öğretimi: Görsel Sanatlar Öğretmenlerinin Deneyimleri Üzerine Bir Durum Çalışması”, Muğla Sıtkı Koçman Üniversitesi Eğitim Fakültesi Dergisi, 9(1):78-97. DOI: 10.21666/muefd.959628
- Timur, B. Ve İmer, N. (2012). “Fen ve teknoloji öğretmenlerinin derste kullandıkları öğretim yöntem ve tekniklerinin incelenmesi”, X. Ulusal Fen Bilimleri Ve Matematik Eğitimi Kongresi. Niğde Üniversitesi, Eğitim Fakültesi, Niğde. http://kongre.nigde.edu.tr/xufbmek/dosyalar/tam_metin/pdf/
- Ünalın, T. (2008). “The Effectiveness Of Collaborative Learning Applications In Art Education”, Uluslararası Sosyal Araştırmalar Dergisi, The Journal of International Social Research, 1(5):869-879.
- Wilson, B. (1971). Evaluation Of Learning In Art Education, In Bloom, J. Hastings, and G. Madous (Ed), Handbooks on formative and summative evaluation of student learning. Mc Grow, Hill.
- Yılmaz, M. (2007). “Görsel Sanatlar Eğitiminde İşbirlikli Öğrenme”, Kastamonu Üniversitesi Kastamonu Eğitim Dergisi, 15(2):749 - 758.
- Zimmerman, E. (1997). Authentic assessment research in art education, An Introduction/Standardized Testing and Authentic Assessment Research in Art Education. (Eds. La Pierre, Sharon and Enid Zimmerman) In Research Methods and Methodologies for Art Education, (pp.149-168). NAEA.
- Zimmerman, M. R. (2011). “Assessment, National Art Education Association Handout” http://www.arteducators.org/news/nationalconvention/Zimmerman_NAEA_Assessment_2011.pdf

APPENDICES

Appendix A: Research Project:

Research Project / History of Photography Course

Department of Photography / Faculty of Fine Arts

The content of the research project expected to be prepared within the scope of the History of Photography course is as follows;

- ✓ It should be written on A4 paper, 12 points, New Times Roman font, and 2 spaces.
- ✓ Name, Surname, Student Number, Course Name, and Project title must be specified.
- ✓ The output of the project must be delivered on the specified date, deadline must be followed.

Project Research Topics:

1. Search about the copying techniques used before the discovery of photography.
2. Make a “Camera Obscura” as described in the lesson.
3. Search about the Daguerreotype Technique.
4. Prepare a research paper that includes the importance of the photographic work of Robert Adamson and David Octavius Hill in terms of the history of photography.
5. Examine the pioneers of Pictorialist Photography.
6. Search for the Pioneer names of the photograph.
7. Evaluate photography in the context of art movements.

Research Project / History of Turkish Photography Course

Department of Photography / Faculty of Fine Arts

The content of the research project expected to be prepared within the scope of the History of Photography course is as follows;

- ✓ It should be written on A4 paper, 12 points, New Times Roman font, and 2 spaces.
- ✓ Name, Surname, Student Number, Course Name, and Project title must be specified.

- ✓ The output of the project must be delivered on the specified date, deadline must be followed.

Project Research Topics:

1. Search about the first photography that emerged with the invention of photography.
2. Search about the first established photography studios in the Ottoman Empire.
3. Explain the importance of Yıldız Photography albums in terms of Turkish photography history as explained in the course
4. Search about Ebüzziya Printing House.
5. Search about the Photographers of the Republican Era.
6. Research the first press photographers.
7. Examine today's contemporary photographers.

Appendix B: Group Presentation Tasks

History of Turkish Photography Course Group Presentation

Department of Photography / Faculty of Fine Arts

In groups of five, choosing one of the homework titles prepared within the scope of the "Research Project";

- ✓ Prepare a 10-minute presentation (in the form of a powerpoint slide).
- ✓ Presenting the prepared presentation to the class.

Appendix C: Peer Assessment

History of Turkish Photography Peer Assessment

Department of Photography / Faculty of Fine Arts

Evaluate your classmates' Research Projects and Presentations according to the following criteria.

Peer Evaluation Form¹

15 points

Evaluator's Name:

Module Number:

Date:

List each team member and rate them on a scale of 1 to 3 in each of the areas listed:

3 = Above average

2 = Average

1 = Below average

Quality (3 points): Completed all assignments at the level of quality expected by the group

Responsibility (3 points): Completed all assignments in a timely manner

Teamwork (3 points): Worked well with other team members

Contribution (3 points): Contributed to the group in an equitable fashion

Attitude (3 points): Projected positive attitude throughout module/project

Member Name	Quality	Responsibility	Teamwork	Contribution	Attitude	Total

Additional comments:

¹Adapted from: Conrad, R. M., and Donaldson, J. A. (2004). *Engaging the Learner: Activities and Resources for Creative Instruction*. San Francisco, CA: Jossey-Bass, p. 32.

Appendix D: Kahoot Quizzes

The screenshot shows the Kahoot! dashboard with a sidebar on the left containing navigation options like 'Kahootlar', 'Kurslar', 'Satin alınan içerik', and 'Klasörlerim'. The main area displays a list of quizzes under the 'Fotoğraf Tarihi' category. The quizzes are:

- 2**: 9 Soru, Güncellenme zamanı: 1 ay önce • 1 kez oynandı. Buttons: Ata, Başlat.
- Kaydedilmemiş değişiklikler Öncüler**: 5 Soru, Güncellenme zamanı: 2 ay önce • 1 kez oynandı. Buttons: Ata, Başlat.
- Fotoğraftan Önce**: 7 Soru, Güncellenme zamanı: 2 ay önce • 3 kez oynandı. Buttons: Ata, Başlat.

The screenshot shows the Kahoot! quiz interface for the 'Fotoğraftan Önce' quiz. The quiz is titled 'Fotoğraftan Önce' and has 7 questions. The questions are:

- 1 - Quiz: Işık yoluyla bir nesnenin görüntüsünü bir yüzey üzerinde oluşturulabilmesini sağlayan temel unsurlar nelerdir?
- 2 - Quiz: Aşağıdaki görsel, ışık yoluyla yüzey üzerinde görüntü oluşturma yöntemlerinden hangisidir?
- 3 - Quiz: 1786'da, C.-Louis Chretien tarafından bulunan, gravürü mekanikleştiren ve zaman kazandıran çizim aracının adı nedir?
- 4 - Quiz: Örnekteki gibi, küçük bir delikten ışık alan ve içerisinde görüntünün ters olarak oluştuğu kutuya ne ad verilir?
- 5 - Quiz: 'Camera Obscura'nın Latince kelime anlamına aşağıdakilerden hangisidir?
- 6 - Quiz: 965'de gözün yapısı, yanlısama, perspektif, ışığın kırılması ve "camera obscura" dan bahseden ve açıklayan kişi kimdir?
- 7 - Quiz: Çalışmalarında Camera Obscura kullandığı düşünülen ressamın adı nedir?

The screenshot shows the Kahoot! quiz interface for the 'Fotoğraftan Önce' quiz. The quiz is titled 'Fotoğraftan Önce' and has 9 questions. The questions are:

- 1 - Quiz: 1865'te suçlu portrelerine bambaşka bir anlam kazandıran, görseldeki iskoçyalı fotoğrafçının adı nedir?
- 2 - Quiz: Carte-de-visite " isimli fotoğraf yöntemini bulan fotoğrafçı aşağıdakilerden hangisidir?
- 3 - Quiz: Frederick Scoq Archer'ın bulmuş olduğu fotografik yöntem aşağıdakilerden hangisidir?
- 4 - Quiz: Çoğaltılabilir negatif-pozitif yönteminin adı ve kim tarafından bulunduğu hangi seçenekte doğru olarak verilmiştir.
- 5 - Quiz: William Henry Fox Talbot tarafından hazırlanan ve Calotype negatifler kullanarak oluşturulmuş kitabın adı nedir?
- 6 - Quiz: Görseldeki 1844 tarihli, ünlü 'Saman Yiğini' fotoğrafı kime aittir?
- 7 - Quiz: İskoç Kilisesi'nin dört yüzü için Adamson'dan fotoğraf yardımı olarak görseldeki resmi yapan ressam kimdir?

Appendix E: Word Puzzle

SOLUTION

Fotoğraf Tarihi / Word Puzzle

. C Y A N O T Y P E N F . .
 . . T A E . P
 A . C D N . O
 L . A G D . . H . A T W Z
 B . L U I . . . I R O E I
 O . O M S . . . L N D T
 D A G U E R R E T . T U D . . L G I
 O B S C U R A Y S E . . W F
 P . R . O .
 N E G A T I F . . E . I O .
 D .

Word directions and start points are formatted: (Direction, X, Y)

CYANOTYPE (E,2,1)	DISDERI (SE,10,4)	NADAR (S,15,1)
CALOTYPE (SE,7,3)	POZITIF (S,18,2)	GUMUS (SE,9,4)
DAGUERRE (E,1,7)	NEGATIF (E,5,10)	HILL (SE,13,4)
WEDGWOOD (S,17,4)	TALBOT (SE,4,2)	
OBSCURA (E,5,8)	FENTON (S,16,1)	

Created by Dr. Öğr. Üyesi Murat Han Er using Word Search Generator on Super Teacher Worksheets (www.superteacherworksheets.com)

Name: _____

Fotoğraf Tarihi / Word Puzzle






O C Y A N O T Y P E G H Q P N F C R
 G H H T G D O R O D K P R J A E Y P
 Y E B R A Z C Y R D T H T R D N G O
 C I M F B L J A G D W Y H O A T W Z
 C G Y W V M B J L U I B E I R O E I
 P R I L N W W O K O M S P C L N D T
 D A G U E R R E T L T U D U O L G I
 E H B R O B S C U R A Y S E A Q W F
 U F L I Y L U M H A D I P H R A O W
 W H X D N E G A T I F X E E S I O M
 Z D M N Q M P B D A B G S A D E D O
 I H L W Z F U A I Y Y Y H U E H D C

Find the following words in the puzzle.
 Words are hidden → and ↘ .

CYANOTYPE	DISDERI	NADAR
CALOTYPE	POZITIF	GUMUS
DAGUERRE	NEGATIF	HILL
WEDGWOOD	TALBOT	
OBSCURA	FENTON	

Created by Dr. Öğr. Üyesi Murat Han Er using Word Search Generator on Super Teacher Worksheets (www.superteacherworksheets.com)

Appendix F: Board Games

	Provide information about Daguerre Technique	Please provide information about Photography of Charles Negre	Provide information about photographic studies of David Octavius Hill	What is Carte de Visite?
	Go Back three spaces!	What is the most important feature of the calotype photography technique?		Who owns the photo named "Two Ways of Life"?
What are the characteristics of Pictorialist Photography?	Which photographer owns the photo named Guverte?		Go back five spaces!	
		Give information about the F 64 Group.		

Appendix G: Oral Presentation Rubric

Name: _____ Score: _____

Oral Presentation Rubric

	4—Excellent	3—Good	2—Fair	1—Needs Improvement
Delivery	<ul style="list-style-type: none"> Holds attention of entire audience with the use of direct eye contact, seldom looking at notes Speaks with fluctuation in volume and inflection to maintain audience interest and emphasize key points 	<ul style="list-style-type: none"> Consistent use of direct eye contact with audience, but still returns to notes Speaks with satisfactory variation of volume and inflection 	<ul style="list-style-type: none"> Displays minimal eye contact with audience, while reading mostly from the notes Speaks in uneven volume with little or no inflection 	<ul style="list-style-type: none"> Holds no eye contact with audience, as entire report is read from notes Speaks in low volume and/or monotonous tone, which causes audience to disengage
Content/Organization	<ul style="list-style-type: none"> Demonstrates full knowledge by answering all class questions with explanations and elaboration Provides clear purpose and subject; pertinent examples, facts, and/or statistics; supports conclusions/ideas with evidence 	<ul style="list-style-type: none"> Is at ease with expected answers to all questions, without elaboration Has somewhat clear purpose and subject; some examples, facts, and/or statistics that support the subject; includes some data or evidence that supports conclusions 	<ul style="list-style-type: none"> Is uncomfortable with information and is able to answer only rudimentary questions Attempts to define purpose and subject; provides weak examples, facts, and/or statistics, which do not adequately support the subject; includes very thin data or evidence 	<ul style="list-style-type: none"> Does not have grasp of information and cannot answer questions about subject Does not clearly define subject and purpose; provides weak or no support of subject; gives insufficient support for ideas or conclusions
Enthusiasm/Audience Awareness	<ul style="list-style-type: none"> Demonstrates strong enthusiasm about topic during entire presentation Significantly increases audience understanding and knowledge of topic; convinces an audience to recognize the validity and importance of the subject 	<ul style="list-style-type: none"> Shows some enthusiastic feelings about topic Raises audience understanding and awareness of most points 	<ul style="list-style-type: none"> Shows little or mixed feelings about the topic being presented Raises audience understanding and knowledge of some points 	<ul style="list-style-type: none"> Shows no interest in topic presented Fails to increase audience understanding of knowledge of topic
Comments				

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The oral presentation rubric (Retrieved from http://www.readwritethink.org/files/resources/printouts/30700_rubric.pdf).

Appendix I: Semi Structured Interview Questions

- ✓ What do you think is the effect of Game-Oriented Learning, Peer Assessment and Cooperative Learning on your learning?
- ✓ What are your attitudes toward Game-Oriented Learning, Peer Assessment and Collaborative Learning?
- ✓ What is your general attitude towards the course? and How would you evaluate the course in general?
- ✓ How did the current procedure of the course affect your attitude towards the course?

Appendix G: Research Project Presentation / Mid-Term Exam

History of Photography and History of Turkish Photography Mid-Term Exam

Department of Photography / Faculty of Fine Arts

By choosing one of the titles prepared within the scope of the "Research Project"; students are required to prepare a presentation.

The requirements within the scope of the presentation are as follows;

- a) Preparing a presentation (in the form of a powerpoint slide).
 - ✓ A summary describing the introduction, development and conclusions
 - ✓ Include effective, fluent and understandable information
 - ✓ Supporting with visuals
- b) Presenting the prepared presentation effectively in the classroom for five minutes.
 - ✓ Making Eye Contact
 - ✓ Effective Time Management
 - ✓ Natural and Fluent Speech
 - ✓ Question and Answer Session.