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The Effect of Learning Gallery Teaching Technique on Innovation and Entrepreneurship Levels of Secondary School Students[1]

(Öğrenme Galerisi Öğretim Tekniğinin Ortaokul Öğrencilerinin İnovasyon ve Girişimcilik Düzeylerine Etkisi)

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Makale Geçmişi

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ÖZ

Bu araştırmanın amacı 7. sınıf Evsel Atık ve Geri Dönüşüm konusunun öğretiminde yenilikçi etkinliklerle desteklenmiş öğrenme galerisi öğretim tekniğinin öğrencilerin inovasyon ve fen tabanlı girişimcilik düzeylerine olan etkisini araştırmaktır. Araştırmanın çalışma grubunu 2021-2022 eğitim-öğretim yılında Şırnak İli, İdil İlçesi'nde bulunan bir ortaokulun 7.sınıfında öğrenim gören toplam 40 öğrenci oluşturmuştur. Çalışmanın modeli nicel araştırma yöntemlerinden eşitlenmemiş kontrol gruplu ön test-son test deseni olarak belirlenmiştir. Çalışmanın amacına uygun olarak veri toplama süreci, 7. Sınıf Fen Bilimleri dersi Evsel Atık ve Geri Dönüşüm konusunun işlendiği dersler kapsamında gerçekleştirilmiştir. Deney grubunda Evsel Atık ve Geri Dönüşüm konusunun öğretiminde yenilikçi etkinliklerle desteklenmiş öğrenme galerisi öğretim tekniği, kontrol grubunda ise öğretim programında yer alan öğretim teknikleri ile uygulama süreci yürütülmüştür. Uygulama süreci her iki grupta da 5 hafta süresince devam ettirilmiştir. Araştırmadan elde edilen sonuçlar deney ve kontrol grubu öğrencilerinin uygulama öncesinde inovasyon beceri ve fen tabanlı girişimcilik düzeyleri arasında anlamlı bir farklılık bulunmadığını göstermiştir. Uygulama süreci sonrasında deney ve kontrol gruplarında yer alan öğrencilerin inovasyon beceri ve fen tabanlı girişimcilik düzeyleri arasında deney grubu lehine anlamlı bir farklılık tespit edilmiştir.

Anahtar Kelimeler: evsel atık; geri dönüşüm; girişimcilik; inovasyon; öğrenme galerisi

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Summary

Countries that have realized themselves economically are generally developed in the field of industry, in competition with other countries, able to achieve economic development in a short time, have higher employment and high income levels. Countries with a strong economy have a say in every platform in terms of politics, are prestigious and privileged. The path to the development ability of countries is through innovation and entrepreneurship together with technology (Armut & Kılınç, 2018; Çetindamar, 2002). Innovation is seen as a skill that starts with the individual and affects the whole society; enables cognitive, social and economic development and corresponds to the concepts of renewing, innovating, using or changing new methods as a word (Akkaya, 2016). Entrepreneurship does not only mean establishing a company and making a profit from it, it also appears as a thought, behavior pattern or innovation (Zhang, 2014). In order to raise entrepreneurial individuals who can think innovatively, education systems should be shaped from the ground up. In this context, in order to raise qualified human resources for the labor market that needs individuals with the specified characteristics, students should be trained in learning and teaching processes where they can effectively create knowledge (Kocasaraç & Karataş, 2018). It is thought that the learning gallery teaching technique can provide this learning environment for students. The learning gallery teaching technique, which we see under the name "A Gallery Walk" in foreign sources, is one of the techniques of the cooperative teaching method. This teaching

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technique is a student-centered technique and has many variations. The learning gallery teaching technique is one of the versatile and student-centered teaching techniques that connect students to each other and the subject area with various, interesting, interactive activities (Bowman, 2005). The learning gallery technique offers teachers the opportunity to facilitate learning, and with the use of this technique in learning environments, it is possible for students to take an active role in learning and develop critical thinking, creativity and problem-solving skills (Makmun, Yin Yin, & Zakariya, 2020; Stewart McCafferty & Beaudry, 2017). There is no study in domestic and international literature investigating the effect of the learning gallery technique on skills such as innovation and entrepreneurship. From this point of view, this study aims to examine the effect of the learning gallery teaching technique supported by innovative activities on students' innovation skills and science-based entrepreneurship skills. The study group consisted of 40 students studying in the 7th grade of a secondary school in İdil District of Şırnak Province in the 2021-2022 academic year. The model of the study was determined as an unequalized control group pre-test-post-test design from quantitative research methods. The Innovation Skills Scale, developed by Chell and Athayde (2009) and adapted to Turkish by Akkaya (2016) in 2016, and the Science-Based Entrepreneurship Scale, developed by Deveci (2016), were used as data collection tools in the research. In accordance with the purpose of the study, the data collection process was carried out within the scope of the 7th Grade Science course, which covered the subject of Household Waste and Recycling. Before starting the application, one of the groups was determined as the experimental group by random assignment. Innovation Skills Scale and Science-Based Entrepreneurship Scale were applied to both the experimental and control groups as pre-tests. Then, the application process was started, in the experimental group, the learning gallery teaching technique supported by innovative activities was used in teaching the subject of Household Waste and Recycling, and in the control group, the application process was carried out with the research inquiry-based teaching techniques included in the curriculum. The application process continued for 5 weeks in both groups. In the application process, in the control group, the subject of Household Waste and Recycling was processed in accordance with the curriculum and innovative activities prepared by the researchers were not used in this group. At the end of the application, the same scales were applied to both groups as post-tests. The results obtained from the study showed that there was no significant difference between the innovation skill and science-based entrepreneurship levels of the experimental and control group students before the application. After the application process, a significant difference was found between the innovation skill and science-based entrepreneurship levels of the students in the experimental and control groups in favor of the experimental group. In the light of the findings obtained from the study, it is recommended that further studies be conducted on the learning gallery teaching technique with future studies. In addition, the effect of this technique on different variables can be examined, and the study can be repeated with different grade levels and different units.

Keywords: Household waste, recycling, entrepreneurship, innovation, learning gallery

Introduction

Countries that have realized themselves economically are generally developed in the field of industry, in competition with other countries, able to achieve economic development in a short time, have higher employment and high-income levels. Countries with a strong economy have a say in every platform in political terms, are prestigious and privileged. The path to the development ability of countries is through innovation and entrepreneurship together with technology (Armut & Kılınç, 2018; Çetindamar, 2002). Innovation is seen as a skill that starts with the individual and affects the whole society; enables cognitive, social and economic development and corresponds to the concepts of renewing, innovating, using or changing new methods (Akkaya, 2016). In other words, innovation is the name given to activities, processes and products aimed at making different innovations and changes in the use of technology, information, tools and methods in their entirety than in products, technologies and processes (Bardakçı, 2006). Innovation is also the first step in acquiring entrepreneurial skills, especially in primary and pre-primary education, through ways such as seizing opportunities, developing projects, and expressing oneself. Entrepreneurial skills are related to innovation skills, as they refer to situations such as thinking differently, finding solutions to emerging

problems, and uncovering opportunities (Aras, 2020). According to Bozkurt (2000), entrepreneurship is defined as individuals noticing opportunities in their environment and developing and managing plans and projects using their creativity and innovative thinking skills at a level that can be used in daily life. In addition, entrepreneurship does not only mean establishing a company and making a profit from it, it also appears as a way of thinking, behavior, or innovation (Zhang, 2014). Therefore, education systems should be shaped from the ground up in order to raise entrepreneurial individuals who can think innovatively.

In the Science Curriculum, skills such as innovation, entrepreneurship, and creativity are seen as extremely important issues (Kavacık, Yanpar Yelken, & Sürmeli, 2015). In this program, entrepreneurship skills are included under life skills and innovative thinking skills are included under engineering and design skills. Thus, it is aimed for students to be trained as individuals who have 21st century skills, produce innovative solutions to the problems they encounter, seize job opportunities using their entrepreneurial skills, and also engage in social and commercial activities (MEB, 2018). In this context, in order to train qualified human resources for the labor market, which needs individuals with the specified characteristics, students need to be trained in learning and teaching processes where they can effectively create knowledge (Kocasaraç & Karataş, 2018). When the literature is reviewed, there are studies that show that educating students in active learning environments contributes to learning outcomes (Gökmen, 2021; Gürkan & Gökmen, 2022; Özel, Güven Yıldırım, Önder, & Taşdelen, 2022; Özel, Taşdelen, Güven Yıldıırm, & Önder, 2022). It is thought that collaborative learning environments can be extremely functional at this point. In collaborative learning environments, students find the best way to prepare their evaluations of the subject by making mutual appreciation, corrections and criticisms with each other (Maulana, 2019). Many techniques can be used during the application of this method in the classroom (Doymuş, Şimşek, & Şimsek, 2005). The learning gallery teaching technique, which we see in foreign sources as “A Gallery Walk”, is one of the techniques of the collaborative teaching method. This teaching technique is a student-centered technique and has many variations. The learning gallery teaching technique is one of the versatile and student-centered teaching techniques that connect students to each other and the subject area with various, interesting, interactive activities (Bowman, 2005). The learning gallery technique offers teachers the opportunity to facilitate learning, and with the use of this technique in learning environments, it is possible for students to take an active role in learning and develop critical thinking, creativity and problem-solving skills (Makmun, Yin Yin, & Zakariya, 2020; Stewart McCafferty & Beaudry, 2017). The main purposes of the learning gallery teaching technique include students appreciating each other, developing their minds, accepting criticism, and not being dependent on the teacher (Wicaksono, 2021). While applying this technique, students have tasks such as introducing the products obtained, providing opportunities, asking questions to

understand and find, developing their knowledge and skills, and making presentations (Manik & Bangun, 2019). When these purposes are taken into account, teachers can adapt and apply the learning gallery teaching technique to different varieties as they wish during the learning process. The learning gallery teaching technique is an effective learning technique and is stated to be easy to prepare and apply as long as you understand the steps (Nisa, Mulyati, & Kurniawan, 2023).

When the relevant literature is examined, it is seen that the number of studies conducted on the learning gallery teaching technique, especially in Turkey, is extremely limited (Baydoğdu & Şahan, 2018) and no studies have been conducted on this subject within the scope of science courses. Again, no study has been found in the domestic and international literature investigating the effect of the learning gallery technique on skills such as innovation and entrepreneurship. From this point of view, this study aims to examine the effect of the learning gallery teaching technique supported by innovative activities not included in the literature on students' innovation skills and science-based entrepreneurship skills. The problem statement of this study was determined as follows: Is there a significant difference between the innovation, science-based entrepreneurship and scientific creativity levels of the experimental group students who were taught with the learning gallery teaching technique supported by innovative activities and the control group students who were taught with the teaching technique included in the curriculum in the teaching of the 7th grade Household Waste and Recycling subject of the Science course?

Method

Research Model

The model of this research was determined as a pre-test post-test control group quasi-experimental design from quantitative research methods (Cohen, Manion, & Morrison, 2007). The pre-test post-test control group quasi-experimental design is frequently preferred by researchers in cases where not all variables can be controlled and random assignment cannot be made on previously existing ready groups (Büyüköztürk, 2012; Cohen, Manion, & Morrison, 2007).

Study Group

In this study, one of the existing groups was determined as the experimental group and the other as the control group by the unbiased assignment method. The study group of this research consisted of a total of 40 students studying in the 7th grade of a secondary school in İdil District of Şırnak Province in the 2021-2022 academic year. The students constituting the study group were 22 male and 18 female students. Convenience sampling was used in the selection of the study group. In convenience sampling, the researcher selects the participants from whom the data will be obtained from individuals who are close to the area where the study will be conducted, easily accessible,

suitable for the research, and volunteer to participate in the study (Fraenkel & Wallen, 2003; Gravetter & Forzano, 2012).

Data Collection Tools

The Innovation Skills Scale developed by Chell and Athayde (2009) and adapted to Turkish by Akkaya (2016) and the Science-Based Entrepreneurship Scale developed by Deveci (2018) were used as data collection tools in the study. The first data collection tool of the study, Innovation Skills Scale, was developed by Chell and Athayde, (2009). The scale was adapted to Turkish by Akkaya (2016) in 2016 and validity-reliability studies were conducted on the scale. There are 31 items on the scale, which is in the form of a five-point Likert. As a result of the research, it was calculated that the scale consists of five sub-dimensions, namely Creativity, Leadership, Energy, Self-Efficacy and Risk Tendency, and the reliability value was calculated as Cronbach Alpha .86. The researcher also applied confirmatory factor analysis to the scale and used the translation-back translation technique for language validity.

Another data collection tool used in the study, Science-Based Entrepreneurship Scale, was developed by Deveci (2016) to determine the entrepreneurial skills of middle school students in science classes. The construct validity of the scale was tested with factor analysis, hierarchical cluster analysis and confirmatory factor analysis applied to the scale. As a result of the study, a 13-item scale with 4 factors named as Effective Communication, Need for Achievement, Risk Taking and Teamwork was reached. It was determined that the scale explained 54.34% of the total variance and the Cronbach alpha reliability coefficient was .76. The factor structure of the scale was also confirmed with confirmatory factor analysis.

Data Collection

In accordance with the purpose of the study, the data collection process was carried out within the scope of the 7^{th} grade Science course, where the subject of Household Waste and Recycling was covered. Before starting the application, one of the groups was determined as the experimental group by random assignment and the other. Innovation Skills Scale and Science-Based Entrepreneurship Scale were applied as pre-tests to both the experimental and control groups. Then, the application process was started, and in the experimental group, the learning gallery teaching technique supported by innovative activities was used in teaching the subject of Household Waste and Recycling, while in the control group, the application process was carried out with the research and inquiry-based teaching techniques included in the curriculum. The application process continued for 7 weeks in both groups. Attention was paid to ensure that the activities carried out in the experimental group met the gain of the relevant subject, were suitable for the age and readiness level of the study group, and

were organized in a way that would positively affect innovation and entrepreneurship skills. The innovative activities prepared by the researcher in the experimental group and the content and figures related to the teaching process carried out each week are given in the table below (Table 1).

Table 1.

Process of the Research

Weeks	**Activities**	**Figures**
Innovation Skill Scale and Science-Based Entrepreneurship Scale were applied to both groups		
Week 1	Designing marketable products from waste materials	
Week 2	Poster preparation for the sale of designed products	
Week 3	Introduce and sell your product to the jury	

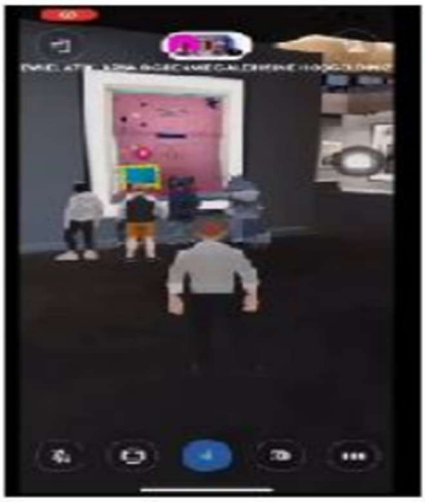
Week 4	Transforming products into learning galleries	
Week 5	Creating a virtual learning gallery	
Innovation Skill Scale and Science-Based Entrepreneurship Scale were applied to both groups		

Table 1 shows the activities carried out by the students in the experimental group throughout the process and the figüres related to these activities. In the control group, the subject of Household Waste and Recycling was covered in accordance with the curriculum during the application process, and the innovative activities prepared by the researchers were not used in this group. At the end of the application, the same scales were applied to both groups as a post-test.

Analysis of Data

The data of the study were analyzed with SPSS 25.0 statistical analysis package program. Before moving on to the analysis of the data, the general distributions of the data obtained from the Innovation Skill Scale and Science-Based Entrepreneurship Scale were determined and it was investigated whether the data showed a normal distribution. The Shapiro Wilk test was applied to the data obtained from the scales. As a result of the analyzes, it was found that the data obtained from the scales showed a normal distribution and the obtained data were analyzed with the independent groups t-test. The significance level was taken as .05 in the analysis of the data.

Findings

Before proceeding to the analysis of the data obtained from the scales in the study, it was first investigated which statistical method would be used to analyze the data obtained from the scales. In quantitative studies, parametric or non-parametric analyses can be used in the analysis of data collected with the help of scales, depending on the characteristics of the data set. In order to apply parametric tests in the analysis of the data, the entire data set to be analyzed must exhibit normal distribution. In this respect, the data obtained from the measurement tools should be examined with the appropriate normal distribution test to determine whether they provide the assumption of normality, and the use of parametric or non-parametric tests should be decided according to the findings obtained (Ghasemi & Zahediasl, 2012; Sim & Wright, 2002). In this study, normality analysis was first performed on the data obtained from all scales used as data collection tools, and the analysis method to be applied to the data set was selected according to the findings obtained. Therefore, it was investigated whether the data collected from the Innovation Skills and Science-Based Entrepreneurship Scale exhibited normal distribution, and the Shapiro Wilk test was applied to the data. The Shapiro Wilk test is generally used when n<50 (Ghasemi & Zahediasl, 2012; Sawyer, 2009). The analysis results are given in Table 2.

Table 2.

Shapiro Wilk Test Results Regarding Pre- and Post-Test Scores of Innovation Skills and Science-Based Entrepreneurship Scale of Groups

Test	Group	Statistics	Df	p
Innovation Skill Scale pre-test	Experiment	.92	20	.11
	Control	.93	20	.19
Innovation Skill Scale post-test	Experiment	.92	20	.12
	Control	.96	20	.51
Science-Based Entrepreneurship Scale pre-test	Experiment	.93	20	.12
	Control	.91	20	.06
Science-Based Entrepreneurship Scale post-test	Experiment	.93	20	.18
	Control	.93	20	.15

When Table 2 is examined, it is seen that according to the Shapiro Wilk test result, the significance levels of the Innovation Skills and Science-Based Entrepreneurship Scale pre- and post-test scores of the groups are greater than p> .05. This value reveals that both the pre-test and post-test scores of the experimental and control groups for both scales are normally distributed. After the normal distribution of the data was observed, it was decided to use parametric tests in the analysis of the data, and the independent groups t-test was used to investigate whether there was a significant difference between the innovation skills pre-test score averages of the experimental and control groups. The findings are given in Table 3.

Table 3.

Independent Groups T-Test Results Regarding the Pre-Test Scores of the Innovation Skill Scale of the Groups

Group	N	M	Sd	t	p
Experiment	20	116.90	4.89	.32	.75
Control	20	116.35	5.83		

Table 3 shows that the Innovation Skill Scale pre-test mean scores of the students in the experimental group are M=116.90 and the pre-test mean scores of the students in the control group are M=116.35. There is no significant difference between the Innovation Skill Scale pre-test mean scores of the students in the experimental and control groups (t= .32; p> .05).

The independent groups t-test results showed that there was no significant difference between the Innovation Skill Scale pre-test mean scores of the students in the experimental and control groups. In order to reveal whether the students' Innovation Skill Scale post-test mean scores differed significantly after the application, an independent groups t-test was performed on the post-test mean scores of the groups. The findings are given in Table 4.

Table 4.

Independent Groups T-Test Results Regarding the Innovation Skill Scale Post-Test Scores of the Groups

Group	N	M	Sd	t	p
Experiment	20	123.75	3.21	2.57	.01
Control	20	119.95	5.79		

According to the data in Table 4, after the application, the mean score of the students in the experimental group is M = 123.75 and the mean score of the students in the control group is M = 119.95. There is a significant difference between the Innovation Skills Scale post-test mean scores of the experimental and control group students in favor of the experimental group (t = 2.57; p < .05).

The study then proceeded to analyze the data obtained from the Science-Based Entrepreneurship Scale. According to Table 2, the Shapiro Wilk test analysis results reveal that the data obtained from the Science-Based Entrepreneurship Scale are normally distributed (p > .05). As a result of the normality test, it was decided to use parametric tests in the analysis of the data and the independent groups t-test was used to investigate whether there was a significant difference between the Science-Based Entrepreneurship Scale pre-test mean scores of the experimental and control groups before the application (Table 5).

Table 5.

Independent Groups T-Test Results Regarding the Pre-Test Scores of the Science-Based Entrepreneurship Scale of the Groups

Group	N	M	Sd	t	p
Experiment	20	46.65	3.07	1.04	.30
Control	20	45.85	1.53		

The data in Table 5 show that the students' Science-Based Entrepreneurship Scale pre-test mean scores were M= 46.65 in the experimental group and M= 45.85 in the control group. According to the data in the table, there is no significant difference between the pre-test mean scores of the experimental and control groups ($t = 1.04$; $p > .05$).

The independent groups t-test results showed that there was no significant difference between the groups' Science-Based Entrepreneurship Scale pre-test mean scores. The independent groups t-test results regarding the entrepreneurship scale post-test scores of the experimental and control groups after the application are given in the table below (Table 6).

Table 6.

Independent Groups T-Test Results Regarding the Post-Test Scores of the Science-Based Entrepreneurship Scale of the Groups

Group	N	M	Sd	t	p
Experiment	20	51.95	2.96	3.46	.00
Control	20	48.85	2.70		

According to the data in Table 6, the mean science-based entrepreneurship score of the students in the experimental group after the application is M = 51.95 and the mean entrepreneurship score of the students in the control group is M = 48.85. There is a statistically significant difference between the mean Science-Based Entrepreneurship Scale scores of the students in the experimental and control groups after the application in favor of the experimental group ($t = 3.46$; $p < .05$).

Conclusion and Discussion

This study aims to investigate the effect of the learning gallery teaching technique supported by innovative activities used in the teaching of the subject of Household Waste and Recycling in the 7th grade of Science course on the innovation and entrepreneurship levels of students. In the study, it was examined whether there was a statistically significant difference between the Innovation Skill Scale pre-test mean scores of the first experimental and control group students and it was found that there was no statistically significant difference between the Innovation Skill Scale pre-test mean scores of the groups. At the end of the study, it was found that there was a statistically significant

difference between the Innovation Skill Scale post-test mean scores in favor of the experimental group. It is thought that this situation is related to the active learning environment provided in the classroom and that the collaborative learning environment created with the learning gallery teaching technique contributes to the innovation skills of the students. According to OECD (2017), innovative learning environments should be structured on the social nature of learning, include the active participation of all students, and especially encourage students to learn collaboratively. When the literature on the subject is reviewed, no previous studies have been found examining the effect of the learning gallery teaching technique on learners' innovation skills. However, when the literature is reviewed, there are studies indicating that working collaboratively enables the emergence of innovative ideas (Konoman, Yokuş, & Yelken, 2016). Similarly, a study was conducted by Soysal (2019) to provide students with 21st century learning and innovation skills through the collaborative learning method. As a result of the study, it was concluded that collaborative learning environments not only positively affect students' learning and innovation skills, but also contribute to the development of their life and career skills. The learning gallery teaching technique also creates a social learning environment for learners. This technique creates a learning environment where learners can share their ideas comfortably, speak in front of the crowd, move freely, travel to each station to see other friends' work, use technological tools, communicate and socialize with their peers in collaboration (Hakim, 2019; Steward McCafferty & Beaudry, 2017; Mulyani, 2014; Radzi, Othman, & Radzi, 2020). Discussions held during the learning gallery develop learners' creative abilities (flexibility, originality and elaboration), and this technique also reveals creative and innovative ways of solving problems in students (Radzi, Othman, & Radzi, 2020).

In the study, it was also investigated whether there was a significant difference between the pre-test mean scores of the students in the experimental and control groups in the Science-Based Entrepreneurship Scale and it was found that there was no significant difference between the pre-test mean scores of the groups. At the end of the application process, a statistically significant difference was found between the post-test mean scores of the students in the experimental and control groups in the Science-Based Entrepreneurship Scale, again in favor of the experimental group. Entrepreneurship is an umbrella concept that helps individuals and employees better understand the opportunities they encounter in daily life, business life, and during the realization of their commercial and social activities in society, and that includes many disciplines (Başar, Ürper, & Tosunoğlu, 2013). Researchers emphasize that in the process of providing entrepreneurship education to students, learning environments should be organized in a cooperative, social and negatively competitive manner where students can develop a new product or service (Deveci, 2016). In this context, the learning gallery teaching technique offers students a cooperative and social learning environment (Mulyani, 2014). In addition, in the learning gallery technique, students develop a new product in

order to present the work they do at their stations in a way that their other friends can understand and explain the product to their friends. At this point, it is thought that the technique can contribute to students' entrepreneurial skills. When the literature on the subject is reviewed, no other study was found that directly investigated the effect of the learning gallery teaching technique on students' entrepreneurial skills. However, Kolodner (2002), who supports the view that the learning gallery teaching technique can increase entrepreneurial skills, also suggests that the learning gallery is an activity that allows students to exhibit their products, thus students handle the product publicly. Similarly, in the study conducted by Saifullah (2011), it was concluded that the learning gallery teaching technique increased the success of learners in the trade theme. It is also stated that academia, industry and business require the ability to collaborate successfully (Francek, 2006). In the research conducted by Soysal (2019), the effect of the cooperative learning method on 21st century learning and innovation skills was investigated. As a result of this study, it was revealed that leadership and entrepreneurship skills, which are a separate subheading within the 21st century life and career skills, increase with cooperative work activities. Again, it is stated by other researchers that the entrepreneurial skills of learners increase in learning environments where different teaching methods/techniques or classroom practices are used. For example, in the study conducted by Tarhan (2018), it was aimed to provide entrepreneurship skills to students in the Social Studies course and the study was conducted according to the action research design. The researcher examined whether the educational activities he designed himself had an effect on the entrepreneurship skills of the learners. As a result of the research, it was concluded that the educational activities designed and implemented by the researcher were effective in providing entrepreneurship skills to the learners. Again, Gönülcü (2019) prepared a learning environment in which sixth-grade students could establish and manage their own companies and examined the effect of these activities on the entrepreneurship skills of the students. The results obtained from the research showed that the activities implemented by the researcher were effective in students gaining entrepreneurship skills, realizing their talents and solving the problems they encountered during the process. Similarly, in another study conducted by Koehler (2013), it was aimed to create low-budget learning environments where experiential learning could be carried out and to examine the entrepreneurship skills of teachers in creating these environments. In the research process, the teaching processes of a teacher who combined activities in physics classes with physics applications in daily life and another teacher who organized learning environments such as visual activities and summer camps for their students were examined. As a result of the study, it was emphasized that the teaching methods/techniques applied to the students by both teachers and the innovative learning environments they created increased the students' entrepreneurial skills and that the students' participatory and investigative skills developed as a result of the process. In the research conducted by Leffler and Svedberg (2005), the effect of the scope and

implementation method of entrepreneurship education in schools on developing entrepreneurial skills in children was examined. In this study, the researchers used the curriculum and activities they designed in the implementation process and conducted the study independently in two stages. In the first stage of the research conducted in Sweden, 149 students and 12 teachers constituted the participant group of the study, and in the second stage, 20 students and 9 project manager teachers constituted the participant group of the study. The data of the research were obtained after these two stages. The results obtained from the research, parallel to the results obtained from this research, showed that entrepreneurship education in schools is based on teaching skills such as collaborative work and creative thinking. In the light of the findings obtained from the study, it is recommended that further studies be conducted on the learning gallery teaching technique in future studies. In addition, the effect of this technique on different variables can be examined, and the study can be repeated with different grade levels and different units.

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