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The Effectiveness of Teaching Art (Motivational Painting) on Preschool Students' Cognitive Creativity and Social Skills

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ABSTRACT

This research examined the effect of teaching art (motivational painting) on preschool students' cognitive creativity and social skills. The research design of this quasi-experimental study includeda pretest-posttest with a control group. 60 students aged 6 years old were selected by purposive sampling from all preschools and kindergartens in Tehran and divided into an experimental group (15 boys and 15 girls) and a control group (15 boys and 15 girls). The experimental group was subjected to the teaching art program of motivational paintings (Silver, 2000) for 12 sessions, two sessions a week, each 45 minutes. Cognitive creativity and social skills were measured by the Torrance Test of Creative Thinking [form B, 1974] and the Social Skills Rating Scale of Gresham and Elliot [parents' form, 1990]. The results were analyzed by Analysis of covariance (ANCOVA), T-test, and Spearman's correlation coefficient. The findings indicated that motivational painting instruction had significant positive effects on the students' cognitive creativity ($p<0.01$) and two subscales of social skills, namely cooperation and responsibility. The research showed that teaching motivational painting can be used by instructors as a useful and productive method to develop new curricula in order to escalate the positive creativity and social skills of learners in pedagogical institutions.

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Introduction

Children of the 21st century are experiencing fundamental changes in their lifestyle, owing to urbanization and the increasing share of modern life (UNESCO, 2021). Gradually, it has shifted their development, learning, and playing activities (American Academy of Pediatrics, 2016; Imanian, 2017). Thus, there is a crucial need for more constructive measures in life to solve their challenges creatively and manage their social problems simultaneously (Hosseini et al., 2019).

Different learning methods are being applied in schools to address the challenges posed by a changing lifestyle. In particular, the interest in creative activity within education has increased enormously (Amponsah et al., 2019; Cropley, 2019; Huang & Almendros, 2019; Kupers & Lthman, 2019). This is mainly due to the accumulated empirical evidence pointing to the positive contribution of creativity on relevant academic and social outputs such as scholastic performance (Fanchini et al., 2019; Gajda et al., 2017; Hansenne & Legrand, 2012).

In view of the increased focus on creativity, a number of efforts have been made in clarifying the meaning of creativity within the schools to identify its essence since this definition is hard to define owing to the diversity of academic opinions on the subject and the complexity of construct(Essa & Burnham, 2019). However, recent definitions reiterate features such as originality, imagination, divergent thinking, and the ability to generate new ideas or reconfigure existing ones in a useful and meaningful way for a given context (Heard et al., 2023; Helfand et al., 2016; Lubart el al, 2021).

The definition of 'creativity' in this study refers to cognitive creativity meaning an individual's ability and capacity to produce new and innovative ideas, works, and products causing the individual to adapt to environmental conditions and situations in an unconventional but constructive and useful way (Sternberg, 2006). In this definition, it is stated that human is born with the potential for creativity and innovation, the flourishing of which requires fostering. In addition, Torrance (1993) considered creativity to be an infinitely developing process that does not increase linearly and continuously; rather, many factors including motivation and teaching methods change its development process (Vidal, 2005). Torrance, therefore, deemed creating opportunities for fostering creativity in any society and education system vital to escalating stud student elopement (Torrance, 1979).

In order to foster creativity in students, the cultivation of conditions conducive to creativity and appropriate attitudes towards creativity education is crucial. This skill can be enhanced through a collaborative, play-based learning process that will allow students to explore their individual interests and curiosities, feel welcome to express their views, and work together to solve daily challenges while taking on engaging tasks (Englebright Fox & Schirrmacher, 2014; Essa & Burnham, 2019; Hakkarainen et al., 2015; Kang, 2020).

There is always the question that at what age teaching creativity should start to have the greatest impact and utilization for students. Early childhood such as preschool age is a critical period for the nurturing of children's creative skills as well as for supporting creative thinking, which in effect, lays down the foundation for their future potential for creativity (Leggett, 2017). Therefore, one of the most important objectives of early childhood education should be to nurture children's imagination and creativity (Ministry of National Education, 2013). One of the methods suggested by educators for promoting preschoolers' creativity is to teach creativity while using art in schools.

Teaching art in a learning environment not only helps foster creativity as a personal work, but also encourages children's cooperation and collaboration in learning activities, promoting friendships, and communication skills (Eisner, 2002). One of the branches of teaching art is the motivational painting approach, which was presented by Silver based on the teaching art approach. Silver used motivational paintings (a collection of special pre-drawn images) to enhance children's cognitive and social skills. He believed that painting was one of the most appropriate ways to foster their creative talents because of its relevance to children's language and deep connection to their inner characteristics and desires (Silver, 2001).

Moreover, the opportunity for young students to expand their nonverbal communication and expression will be given by means of this provision. (Erickson & Blok, 2013) Numerous studies have shown that the most important aspect of kids' development, which is predicted with regard to school and societal adjustment, is successful interaction with peers and adults in a socially responsible manner (e.g. Bornstein et al., 2010).

One of the components that is directly related to creativity and art is social skills. There are different definitions of social skills; among them, Liberman et al. (quoted in Tsang & Lak, 2008) defined social skills as the ability to express feelings and understand others' interests or desires, allowing one to start interacting positively with others, continue it, and being able to end it if destructive. It should be noted that not all children succeed in learning these skills effectively (Gresham & Elliot, 1990) but children who have acquired sufficient social skills are more successful in building relationships with peers (Asher & Taylor, 2001) and learning in

educational environments (Walker & Hopes, 2003) than children lacking these skills.

In this research, two main theories were raised including Process Theory, Vygotsky's Social Constructivism, and the concept of Scaffolding in the development of students' creativity and social skills. According to the first theory, i.e., process theory, when learners are engaged in simple and complex activities proportionate to his/her abilities, this may engender arousal and motivation without anxiety as a result learning performances will be more effective. When students are participating in motivational painting sessions, they are confronted with different challenges. In this class, learners are assisted via clear guidelines while tackling challenges. Also, as children are keen to question, investigate and discover, their openness to new ideas and their ability to use different senses when trying out new thoughts, will enable new connections with others (Amabile, 2018) .

This theory is highly associated with the development-point theory stating students should engage in an activity being slightly higher than their abilities and an activity compatible with their skills. Once students arrive at the Process Stage when they are challenged correctly, and they leave this stage when they are over-challenged, leaving this situation and returning to it will provide the best situation for educational conditions. Because this situation will provide students with this opportunity to believe intheir abilities and use their creativity to become successful in a task.

The second theory is in accordance with the Knowledge Creation Theory, and it results from a process of the Subjective Physical Model which involves several aspects of Vygotsky's Social Constructivism as well as Scaffolding. According to that view, adults and their peers assist each other in interacting between the actual development level determined by problem-solving ability and the potential development level defined using a Problem-Solving Process (Vygotsky, 1978).

Through motivational painting sessions, children are both experiencing enjoyment and indirectly learning to strengthen relationships with peers by receiving constructive feedback from others and active listening. As a result, children both enhance their learning outcomes and social skills by using attractive, active, and effective methods is felt .

Many studies have concluded that teaching art to normal children with special needs (D'Amico & Lalonde, 2017; Jalambadani, 2020; Rashikj et al., 2021) and an early age increases their creativity (Blasdel, 2012; Furnham et al., 2011; Karwowski & Soszynski, 2008; Kisoon, 2012; Posner et al., 2008; Saeeidi et al., 2021; Silver, 2001). Investigating how art education affects children's social skills, researchers also reported a significant positive effect (Yazici, 2017). In addition, in his research by asking whether art education is effective in fostering creativity and developing children's communication skills, Kisoon (2012) concluded that there is a positive relationship between children's creativity and art. But the effect of teaching art (motivational painting) on cognitive creativity and social skills in the preschool age group of normal children has not been studied simultaneously. Due to the relationship between creativity and social skills, the present study sought to answer the following question:

Does teaching art (motivational painting) affect preschoolers' cognitive creativity and social skills?

Method

Research design

The research design of this quasi-experimental study included pretest-posttest with a control group.

Participants

The sample size included 60 students, with 30 in the experimental group and 30 in the control group. The participants were selected through purposive sampling, which means they were selected based on specific criteria rather than random selection. This study was conducted in Tehran and the preschool students were chosen from a total of 1656 preschoolers in preschool centers and kindergartens.

To collect demographic information, a one-page questionnaire titled "Family Information" was created for the study. This questionnaire included questions about the preschool students' age, gender, and birth order, as well as their parents' education, economic status, and social status. The purpose of this questionnaire was to determine the demographic characteristics of the students and their families who participated in each group of the study.

In order to control for certain variables, such as age, gender, birth order, education, and economic status, the researchers selected participants who met specific criteria. Specifically, the participants in the study were the first children from families who were 6 years old. There were 15 female and 15 male students in both the control and experimental groups to ensure an equal gender balance. Additionally, parents with an undergraduate academic degree or higher and an average income level were chosen to control for the education and economic status of the families.

Instruments

In this study, two tests were used to investigate the effect of teaching art (motivational painting) on preschool students' cognitive creativity and social skills: 'Torrance Test of Creative Thinking: Form B' was used to assess cognitive creativity, and 'Social Skills Rating Scale; Parents Form' questionnaire (Gresham & Elliott, 1990) was used to assess social skills.

Torrance Test of Creative Thinking (Form B)

Torrance (1974) had a low coefficient of multiple runs of .75 to .87. In another study, the average reliability coefficient for visual tests was reported to be from .88 to .96. PirKhaefi (2003) reported a reliability coefficient of .80 as a two-week interval by retesting on 48 people in elements of fluidity .78, innovation .74, flexibility .81, and expansion .90. Regarding its validity, after 20 years, the prediction coefficient is 63%.

Torrance Test of Creative Thinking has a high degree of distinction power for assessing the cognitive components of creativity, including fluidity, flexibility, originality, and expansion; Therefore, Torrance Test, especially the visual "B" form, is considered a reference test in measuring creativity (Torrance, 1990).

Social Skills Rating Scale

Internal consistency and retesting as indicators of scale reliability and structural and concurrent validity have been reported as desirable (Shahim, 1998). The reliability coefficient of the test for the social skills factor was .87, and the problem behaviors factor was .65, and the internal consistency for both social skills factors and problem behaviors was .87 (Gresham & Elliott, 1990).

Based on the findings of Gresham and Elliott (1990), this scale has good construct and concurrent validity, and its diagnostic and therapeutic application for preschoolers has been confirmed in several studies.
The Gresham and Elliott Social Skills Rating Scale includes four subscales of cooperation, assertiveness, responsibility, and self-control. In order to score this scale, for each of the three options "often, sometimes, never", values of "2, 1, and 0" are assigned, respectively.

Procedure

Sixty participants were selected after checking and controlling the conditions of the trial test, and 30 were randomly assigned to the experimental group and 30 to the control group. In this research, a cognitive creativity test and a social skills test were given to both groups. Then the experimental group was subjected to the teaching art program of motivational paintings for 12 sessions, two sessions a week, each 45 minutes. In addition, after each session, the students were required to do exercises related to that session at home and bring them to class the next session.

Twelve-session teaching art program of motivational painting

This educational program is the same program as the one used in the study plan of the American National Institute of Education (Silver et al., 2000). The presented program includes goals and methods for 12 sessions.

• *Session 1*
Objectives: Strengthening associative thinking, expressive ability, and communication ability;

• *Session 2*
Objectives: Strengthening the ability to associate and sort based on class or function;

• *Session 3:* Working with colors
Objectives: Strengthening coloring skills and develop sensitivity to subtle differences in colors;

• *Session 4:* Working with colors
Objectives: Strengthening the ability to create sequences;

• *Sessions 5 and 6:* Imaginative painting
Objectives: Developing and strengthening the ability to form the concepts of space, sequence, and class;

• *Session 7*: Predictive drawing and painting
Objectives: Developing and strengthening the ability to understand horizontal and vertical concepts;

• *Session 8*: Working with modeling clay (Coils and Sanstroem method)
Objectives: Developing and strengthening the ability to understand concepts related to spatial relations and mental maintenance ability;

• *Session 9*: Working with modeling clay (tablet method)
Objectives: Developing and strengthening the ability to understand concepts related to spatial relations and mental maintenance ability;

• *Session 10*: Working with modeling clay (block method)
Objectives: Developing and strengthening the ability to understand concepts related to space, sequence, and class;

• *Session 11*: Observational drawing and imaginative drawing
Objectives: Developing and strengthening awareness of spatial relations (right, left, top, bottom, back, front);

• *Session 12*: Observational drawing and imaginative drawing
Objectives: Developing and strengthening the ability to understand concepts related to space, sequence, and class.

Findings

The findings of the research in the descriptive and inferential parts are as follows.

Table 1.
Descriptive Indicators of the Components of Cognitive Creativity and Social Skills By two Groups in Pre-/ Post-Test

Variable /Component	Pre-Test				Post-Test			
	Experimental		Control		Experimental		Control	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Fluidity	30.87	5.87	32.13	6.23	47.73	7.40	35.03	6.57
Flexibility	32.27	5.58	32.53	6.03	49.13	8.59	35.13	6.23
Originality	32.63	6.59	33.73	4.86	47.50	8.00	36.77	5.72
Expansion	32.57	6.73	36.83	7.65	57.13	10/05	41.30	8.67
Cognitive-creativity	33.10	6.27	33.63	6.02	53.23	9.63	45.87	11.90
Cooperation	5.27	3.26	5.80	4.16	15.93	3.99	9.47	3.83
Assertiveness	5.40	3.74	4.73	3.01	15.47	4.19	9.67	4.34
responsibility	4.53	2.93	4.43	3.31	11.93	3.32	8.67	3.58
Self-control	6.07	3.82	6.63	5.02	14.93	4.23	10.93	4.64

Table 1 shows the descriptive indicators including the mean and standard deviation in the experimental and control groups in pre-test and post-test in the components of cognitive creativity and social skills. As can be seen, the mean scores in the control group in the pre-test and post-test have slightly changed, but this difference is more in the experimental group.

Since the design of this study was a pretest-posttest one with a control group, a one-way analysis of covariance was used to test the hypotheses. Before using this statistical method, its assumptions including the correlation between pretest and posttest scores, linearity between pretest and post-test, homogeneity of regression coefficients, and homogeneity of variances were examined. Due to the limited number of tables per article, the results of the assumptions are reported without providing a table.

Pearson correlation was used to investigate the hypothesis of correlation between pre-test and post-test scores. It shows the relationship between the pre-test and the post-test scores in cognitive creativity and its components in the pre-test and post-test. As can be seen, the Pearson coefficient for fluidity, flexibility, originality, expansion, and cognitive creativity are .51, .51, .50, .59, and .54, respectively, and for cooperation, assertiveness, responsibility, and self-control are .42, .46, .48, and .51, respectively. All of these relations are positive and significant ($p < 0.01$). This means that in all of these components, the higher the individual's scores on the pre-test scores, the higher the post-test scores.

The results of examining the assumption of linearity of the relationship between the pre-test and post-test showed that because the significance value of the F-test is less than 0.05, there is a linear relation between the pre-test and post-test in cognitive creativity and its components and dimensions of the social skills variable. The F value for fluidity, flexibility, originality, expansion, and cognitive creativity, is 20.88, 15.96, 16.43, 27.34, 23. 17, respectively, and for cooperation, assertiveness, responsibility, and self-control is 11.61, 15.93, 16.62, 17.78, respectively.

Examining the hypothesis of homogeneity of regression coefficients through testing if there is an interaction between the pretest variable and the dependent variable also showed that since the significance value of the F test is more than 0.05, there is no interaction between the pretest and posttest in cognitive creativity and its component and dimensions of social skills variable. F values for fluidity, flexibility, originality, expansion, and cognitive creativity are .68, .98, .85, .78, .07, respectively, and for cooperation, and responsibility are 2.55 and 2.60, respectively. Also, because the significance value of the F-test is less than .05, there is an interaction between the pre-test and post-test in the social components of assertiveness and self-control with F values of 4.15 and 5.39.

The results of the Levene test for homogeneity of variances also showed that the F value in the variable of cognitive creativity and its components and the dimensions of social skills variable is less than .05, so the variances of the two groups are not homogeneous. Of course, it should be noted that if the volumes of groups are equal, the analysis of variance will not be sensitive to the assumption of the equality of variance (Shavelson, 1988). The F-test for fluidity, flexibility, originality, expansion, and cognitive creativity is 16.87, 20.25, 10.09, 20, and 23.83, respectively, and for

cooperation, and responsibility is 9.84 and 2.13, respectively.

Table 2.
Tests of Normality (Kolmogorov–Smirnov)

Variable or component	Pre-Test				Post-Test			
	Experimental		Control		Experimental		Control	
	statistic	Sig.	statistic	Sig.	statistic	Sig.	statistic	Sig.
Fluidity	0.10	0.20	0.11	0.24	0.15	0.18	0.14	0.11
Flexibility	0.14	0.18	0.15	0.17	0.18	0.20	0.13	0.09
Originality	0.09	0.21	0.08	0.29	0.11	0.28	0.17	0.11
Expansion	0.30	0.09	0.24	0.08	0.21	0.11	0.12	0.18
Cognitive-Creativity	0.25	0.10	0.20	0.11	0.18	0.21	0.11	0.18
Cooperation	0.12	0.28	0.18	0.29	0.16	0.11	0.13	0.19
Assertiveness	0.32	0.18	0.30	0.17	0.20	0.12	0.21	0.09
Responsibility	0.18	0.11	0.17	0.10	0.15	0.19	0.19	0.10
Scontrol-elf	0.12	0.18	0.11	0.16	0.09	0.23	0.20	0.09

According to Table 2, the results of the Kolmogorov-Smirnov test showed that the statistical indices of the variables' scores in the pre-and post-test are not statistically significant at the five percent error level. Therefore, the distribution of the observed scores of the variables in the pre-and post-test is not different from the theoretical distribution and is consistent with it (normal).

Table 3.
One-way Analysis of Covariance to Compare the Mean of the Two Groups in Cognitive Creativity Variable and its Component

Variable	Sources of Variance	Sum of Squares	DF	Mean Squares	F	Significance	Partial Eta Square
Fluidity	pre-test	1859.51	1	1859.51	108.01	0.0001	0.51
	group	2859.48	1	2859.48	166.09	0.0001	
	error variance	981.31	57	17.21			
	modified sum	5260.18	59				
Flexibility	pre-test	1746.49	1	1746.49	65.38	0.0001	0.35
	group	3044.98	1	3044.98	114.004	0.0001	
	error variance	1522.43	57	26.70			
	modified sum	6208.93	59				
Originality	pre-test	1437.29	1	1437.29	59.64	0.0001	0.37
	group	2026.75	1	2026.75	84.10	0.0001	
	error variance	1373.57	57	24.09			
	modified sum	4538.93	59				
Expansion	pre-test	5732.60	1	5732.60	100/03	0.0001	0.48
	group	3891.84	1	3891.84	119.51	0.0001	
	error variance	1856.16	57	32.56			
	modified sum	8874.18	59				
Cognitive creativity	pre-test	2794.21	1	2794.21	116.88	0.0001	0.47
	group	4498.91	1	4498.91	188.19	0.0001	
	error variance	1362.64	57	23. 90			
	modified sum	8356.93	59				

Considering the fact that, the significant value reported in Table 3 for the independent variable in cognitive creativity and its components is less than 0.01, it can be said that after removing the pre-test effect, there is a significant difference between the mean of the two control and experimental groups in the post-test. Therefore, teaching art (motivational painting) is effective in preschool students' fluidity (F (1.57)

=166.09, p<0.01), flexibility (F (1.57) =114, p<0.01), originality (F (1.57) =84.10, p<0.01), expansion (F (1.57) =119.51, p<0.01), cognitive creativity (F (1.57) =188.19, p<0.01). It should be noted that the weighted mean of the fluidity component of preschoolers after removing the pre-test effect is 47.73 for the experimental group and 35.03 for the control group; The weighted mean of the flexibility component of preschoolers after removing the pre-test effect, for the experimental group is 49.13 and for the control group is 35.13. The weighted mean of the originality component of preschoolers after removing the pre-test effect is 47.50 for the experimental group and 36.77 for the control group. The weighted mean of the expansion component of preschoolers after removing the pre-test effect for the experimental group is 57.13 and for the control group is 40.30, and the weighted mean of the cognitive creativity variable of preschoolers after removing the pre-test effect is 54.23 for the experimental group 37.50 for the control group.

Table 4.
One-way Analysis of Covariance to Compare the Mean of the Two Groups in the Variable of Social Skills and its Components

Variable	Sources of Variance	Sum of Squares	DF	Mean Squares	F	Significance
Cooperation	pre-test	337.01	1	337.01	34.78	0.0001
	group	692.03	1	692.03	71.41	0.0001
	error variance	552.32	57	9.69		
	modified sum	1516.60	59			
Responsibility	pre-test	191.90	1	191.90	21.85	0.0001
	group	154.38	1	154.38	17.57	0.0001
	error variance	500.62	57	8.78		
	modified sum	852.60	59			

Considering the fact that the significance value in Table 4 for the independent variable in cognitive creativity and its components and the components of the social skill variable is reported as less than 0.01, it can be said that after removing the pre-test effect, there is a significant difference between the mean of the two control and experimental groups in the post-test; Therefore, teaching art (motivational painting) is effective in preschool students' cooperation (F(1,57)=71.41, p<0.01), responsibility (F(1,57)=17.57, p<0.01. It should be noted that the weighted mean of the preschool students' cooperation component after removing the pre-test effect is 15.93 for the experimental group and 9.4 for the control group, and the weighted mean of the preschool students' responsibility component after removing the pre-test effect is 11.93 for the experimental group and 8.67 for the control group. Given that the results of the homogeneity of variances test indicate the non-homogeneity of variances in the components of assertiveness and self-control, these two components were not significant in our research.

Discussion

This research examined the effect of teaching art (motivational painting) on preschool students' cognitive creativity and social skills. It should be noted that since the discussion about the two dependent variables of the research and their subscales is detailed, in this article we have briefly mentioned only the variables and subscales that have been significant in the research. Considering the first research hypothesis "teaching motivational painting is effective in increasing preschool students' cognitive creativity", the results obtained from the findings of this research indicate that in all 4 factors and overall creativity, the mean in the experimental group after the pre-test effect is greater than that of the control group. Therefore, it can be stated that teaching art (motivational painting) has had a positive effect on the fluidity, flexibility, originality, expansion, and creativity of all the students. In general, teaching motivational painting has increased preschool students' cognitive creativity, which is consistent with the previous research (Blasdel, 2012; Furnham et al., 2011; Karwowski & Soszynski 2008; Kisoon, 2012; Posner et al., 2008; Silver, 2001).

To explain this finding according to Process theory, we can point to the fact that art is a source of motivation in students and urges them to move, learn new ways, and acquire new skills in the emergence of creativity. Because in motivational painting classes, the educator first gets to know the interests and capabilities of the students individually (Silver, 2001), then, by proposing challenging activities according to their abilities, they provide a rich situation for students to get to know

themselves and their surroundings in the process. In this process, the educator plays the role of a facilitator and a guide who believes that if the challenges are too easy for students, it will make them bored, and if too hard for the students, they may experience successive failures, which possibly causes disappointment and a decrease in their self-confidence (Silver, 2000). Students can use their peers and teacher's help to increase their actual development level and achieve the potential development level by participating in teamwork (Vygotsky, 1978).

Fluidity is a component of creative thinking. According to the results obtained, after performing the motivational painting book, students tried to provide more numerous answers to unusual questions (Torrance, 1979). Therefore, it can be stated that teaching in this method increases the fluency or fluidity of students's answers. To explain it, it can be said that during several sessions, the educator provides students with white and three main colors on a color palette with the aim of making the students create many spectral colors. Then the students are encouraged to mix as many colors as they can and make more diverse spectral colors. Finally, with the colors they have made, they draw the picture they want and explain its story to their classmates (Silver, 2001).

Flexibility means producing different ideas; This means that when dealing with problems, students change their way of thinking and align themselves with the problem when changed or presented from another angle (Torrance, 1979). To explain the point, it is stated that, during some sessions, the educator presents various cards to the students and asks them to carefully pay attention to the cards and their content. Then the students have to try to make connections between the cards. After that, the students actively listen to the content of the cards of the other members of the class, how they connected the cards and the story they have made for them. Finally, they get to know the different viewpoints of the class members.

Originality or innovation means using new and unique ways. Torrance (1979) believed that people with innovative ideas and unusual solutions that others do not think of, interestingly solve problems that others think have no solution. The results of this research show the increase of this skill in students, in the way that at the beginning of a class session, students made small and light boats with modeling clay. Then, after they were dried, the educator put the boats in a water container, and in the next step, in order to increase the students's guessing skills, he asked each student challenging questions about the place of the boat in different situations. For example, if we tilt the right end of the water container, what position do you think your boat will be in? Then the students tried to draw their visualizations, predictions, and guesses. Finally, after all the students explained their drawings, each of which contained a point of view, the teacher showed them in action what state the water and the boat will have (Silver, 2001).

The results of the research showed that teaching creative painting books has increased the expansion component and attention to more details of students's ideas. In fact, teaching in this method made students imagine more details while paying attention to the general concepts and finding a connection between themselves and the situation (Silver, 2000). To explain this, it can be claimed that in a session, the educator presents the animal cards to the students and then asks them to carefully pay attention in detail to the cards and sort them, and can explain what is on the card to other classmates with as much detail as they can. In general, from the eighth to the twelfth session, the educator presents activities that are related to overall creativity and all 4 subscales of creative thinking to preschoolers.

The purpose of art education is to directly connect students to artistic creation through art experience and to have them play an active role in it. Students can reach form by activating their emotional and mental processes. Observation, research, discovery, practice, testing, supervision, and conclusion are all fundamental artistic educational processes that prepare students and young people for the world of modern science and technology (Etike,1995).

Art classes teach students by helping them activate their emotional and mental processes through observation, research, discovery, practice, experimentation, monitoring, and performance, the processes of basic art education. It aims to provide an environment in which art can be experienced and actively participated. Prepare students and youth for the scientific and technological world of our time (Aypek Arslan, 2014).

In addition, according to the second research hypothesis "teaching motivational painting had a positive effect on the increase of two subscales of social skills of preschoolers", the results of this research indicated that in both factors, the mean in the experimental group after removing the pre-test effect is greater than that of the control group. Therefore, it can be stated that teaching art (motivational painting) has had a positive effect on students's cooperation and responsibility. The result obtained is consistent with the results of Kisoon (2012); Aksoy and Baran (2010); as well as Wandell et al. (2008). In explaining this issue, we can mention the points that improvement and change within the social construction in the present time requires training balanced, consistent, and creative

people with self-esteem, who can criticize, and know what to do instead of those who are passive and receptive as they are without questioning social cases and phenomena.

Students who have high social skills, in addition to starting positive and useful relationships, are also able to maintain, continue, and expand these intimate relationships and cooperate with other peers and adults. People do this through acceptable, purposeful, interrelated verbal and non-verbal behaviors (Kolb et al., 2003). In motivational painting classes, students implicitly learn that in order to draw pictures and create their own works of art, they can start positive relationships with the teacher and other peers during the class, and expand it in other sessions. This makes it an effective exercise with their emotional tool, which increases step by step due to the child being in a safe and stress-free atmosphere. In addition, at the end of each session, by changing their sheets or structures, students look at a story from different points of view actively listen to different opinions, and discuss with other classmates.

Cartledge and Milburn (1996) in their classification of various types of social skills stated that one of the necessary conditions for cooperation with people, especially peers, for students is to first recognize their own and others' emotions and feelings, and then be able to understand their meaning. In this case, after some time since the beginning of the relationship, by understanding the emotions of the other party, they can try to empathize and cooperate with them if they need help.

During motivational painting classes, the educators, considering the conditions of the student's age, and their development stage, try to provide the students with the tools appropriate to that age to implicitly introduce the students to their own and others' feelings. Motivational painting includes pictures of people, animals, places, and objects. Some of them are clear and others are vague to slowly introduce individuals to their feelings. Such relationships make students understand the difference between their own and others' views and perceptions of situations, and they also practically understand others in the process of drawing, in addition to being influenced by their own emotions. Teaching art in the form of motivational paintings becomes a very effective step to progress in learning social skills and understanding students' emotions (Silver, 2001).

Raudsepp (2005) stated that a person with high social skills should take responsibility for his choices and express his thoughts and feelings in an appropriate and honest way without anxiety in the face of demands that are against his wishes, without violating others' rights in order to have a positive attitude towards himself and others. In painting classes, students learn how to see, hear, communicate, and move toward the production of artistic products. They learn how the environment can shape their feelings and actions and how they can develop their existential capabilities for artistic expression with regular and purposeful activity (Rastegarpour, 2012).

Conclusions

The results indicate that the effect of teaching motivational painting on the preschool students' cognitive creativity and two subscales of social skills, namely cooperation, and responsibility, was positive in general. As a result, the research showed that teaching motivational painting as a productive method can be used to teach cognitive creativity and social skills to students. Teaching art (motivational painting) has a positive effect on preschool students' cognitive creativity. The experimental group showed a greater increase in fluidity, flexibility, originality, expansion, and overall creativity compared to the control group. This finding is consistent with previous research.

Also, Art serves as a source of motivation for students, leading to increased creativity. The process of teaching motivational painting allows students to explore their interests and capabilities, engage in challenging activities, and learn from their peers and teachers. This process facilitates the development of cognitive creativity. Moreover, motivational painting classes enhance fluidity by encouraging students to provide multiple answers to unusual questions and create diverse spectral colors. Flexibility is also fostered through activities that require students to make connections between cards and consider different viewpoints from their classmates.

Furthermore, teaching motivational painting promotes originality by engaging students in creating unique solutions and encouraging them to think outside the box. In addition, expansion, or attention to more details, is enhanced by activities that prompt students to observe animal cards and describe them with as much detail as possible. Art education aims to activate students' emotional and mental processes and provide an environment for active artistic participation. It prepares students for the world of science and technology. Teaching motivational painting also has a positive effect on preschoolers' social skills, particularly in terms of cooperation and responsibility. The experimental group showed greater improvement in these areas compared to the control group, which is consistent with previous research.

Motivational painting classes also enable students to develop positive relationships, cooperate with peers and adults, recognize and understand emotions, and express

thoughts and feelings in an appropriate way. By engaging in the process of creating art, students learn to take responsibility for their choices and develop a positive attitude towards themselves and others. Furthermore, motivational painting classes provide a safe and stress-free atmosphere for students to actively listen to and discuss different opinions, fostering social skills such as empathy and understanding of others' emotions.

Practical Implications

Incorporate motivational painting into preschool curriculum: Based on the findings that teaching art (motivational painting) has a positive effect on preschool students' cognitive creativity and social skills, it is recommended to include motivational painting as a regular activity in preschool classrooms. This can be done by allocating specific time for art classes or integrating art into other subjects.

Provide training for educators: Since the research highlights the importance of the educator's role as a facilitator and guide during motivational painting classes, it is crucial to provide training for preschool educators on how to effectively implement and facilitate art activities. This training can focus on understanding the interests and capabilities of students, proposing challenging activities, and fostering a supportive and creative environment.

Foster creativity through art: The research emphasizes the impact of motivational painting on various aspects of creativity, such as fluidity, flexibility, originality, and expansion. To further enhance creativity in preschool students, educators can incorporate open-ended art projects allowing children to explore and experiment with different materials, colors, and techniques. Encouraging students to express their ideas and interpretations through art can foster their creative thinking skills.

Encourage collaboration and responsibility: The research indicates that motivational painting classes promote cooperation and responsibility among preschool students. Educators can create opportunities for collaborative art projects where children work together to create a shared artwork. This can involve activities such as group murals or collaborative sculptures. Additionally, educators can encourage students to take responsibility for their artwork, such as cleaning up after art activities or presenting and explaining their work to their peers.

Emphasize emotional intelligence: The research suggests that motivational painting helps students develop emotional awareness and empathy. Educators can incorporate discussions and reflection activities during art classes to help students identify and express their emotions through art. This can involve asking questions about the feelings portrayed in artwork or encouraging students to share the stories or meanings behind their artwork. By nurturing emotional intelligence through art, students can develop better interpersonal skills and a deeper understanding of themselves and others.

Provide a safe and supportive environment: The research highlights the importance of creating a safe and stress-free atmosphere during art classes. Educators should ensure that the art space is welcoming, inclusive, and non-judgmental, allowing students to freely express themselves and take risks in their artwork. Providing positive feedback and encouragement can also boost students' confidence and motivation to explore their creativity.

Integrate art across subjects: Art can be integrated into other subjects to enhance learning and creativity. Educators can incorporate art activities into language arts by having students illustrate stories or create visual representations of vocabulary words. Similarly, in science or social studies, students can create art projects related to the topics being studied. Integrating art into different subjects can make learning more engaging and provide students with diverse opportunities for self-expression and creativity.

Involve parents and the community: Educators can engage parents and the community in showcasing and celebrating students' artwork. This can involve organizing art exhibitions or inviting parents to art presentations where students explain their artwork. Collaborations with local artists or art organizations can also provide opportunities for students to interact with professionals and showcase their artwork to a wider audience. By involving parents and the community, students' artistic achievements and growth can be recognized and valued.

Overall, these practical suggestions can help preschool educators effectively incorporate motivational painting into their teaching practice, fostering cognitive creativity and social skills in their students.

Limitations and Suggestions for Future Research

Although this study resulted in a number of interesting discoveries, it also has some limitations. First, this study did not have a follow-up to monitor the level of sustained effectiveness. Future researchers may consider having follow-up in their research. Second, the size of the sample was not large. Future researchers may consider a larger sample group to benefit from “motivational painting training”. Third, this study focused on

preschool children, other studies may consider other age groups. Furthermore, it is recommended to conduct comparative studies between two creativity-oriented educational interventions in addition to motivational painting training.

Authors' Contributions

All authors contributed equally to this paper.

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Ethical Approval

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Conflicts of Interest

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