

Automatism as a Means of Expression in Creativity: An Experimental Practice for Art Education Students

Yaratıcılıkta İfade Aracı Olarak Otomatizm: Sanat Eğitimi Öğrencilerine
Yönelik Deneysel Bir Uygulama

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ABSTRACT: This study aims to identify the creativity problems experienced by art education students in the context of their main art workshop painting course and to determine the effect of automatism on creativity. The study employed a mixed-methods research approach. Participants consisted of third-year students from the fine arts workshop painting group studying art at two different state universities. At the quantitative stage, differences between students' cognitive levels regarding automatism and the automatist drawing (pre-test), automatist drawing (post-test 1), and music-accompanied automatist drawing (post-test 2) were examined by developing an educational program. Semi-structured interviews were conducted to obtain students' experiences regarding the intervention process before and after the intervention. Data were obtained using a holistic rating scale, a rating scale, and a semi-structured interview form. Quantitative data were analyzed using one-way repeated measures MANOVA, while qualitative data were analyzed using content analysis. Quantitative analyses have shown that students' cognitive levels and creativity underwent statistically significant positive change after the intervention. Qualitative data showed that students gained theoretical knowledge and practical techniques related to automatism after the intervention and applied them in practice, resulting in positive well-being during the creativity phase.

Keywords: Art education, automatism, automatist technics, unconscious, expressionist music.

ÖZ: Bu çalışma, resim-iş öğretmenliği bölümü öğrencilerinin anasanat atölye resim dersi kapsamında deneyimledikleri yaratıcılık sorunlarını tespit etmeyi ve otomatizmin yaratıcılık üzerindeki etkisini belirlemeyi amaçlamaktadır. Çalışma, karma araştırma yöntemiyle yürütülmüştür. Katılımcılar, iki farklı devlet üniversitesinde sanat eğitimi alan anasanat atölye resim grubu üçüncü sınıf öğrencilerinden oluşmaktadır. Nicel aşamada öğrencilerin otomatizme yönelik bilişsel düzeyleri ile otomatist resim (ön-test), otomatist resim (son-test 1) ve müzikli otomatist resim (son-test 2) arasındaki farklılıklar eğitim programı geliştirilerek incelenmiştir. Nitel aşamada öğrencilerin, müdahale öncesi ve sonrası uygulama süreciyle ilgili deneyimlerine ulaşmak için yarı yapılandırılmış görüşmeler gerçekleştirildi. Veriler, bütünsel dereceli puanlama anahtarı, dereceli puanlama ölçeği ve yarı yapılandırılmış görüşme formu aracılığıyla elde edildi. Nicel veriler tek yönlü tekrarlı ölçümler çoklu varyans analizi (One-Way Repeated Measures MANOVA), nitel veriler ise içerik analizi kullanılarak analiz edildi. Nicel analizler, öğrencilerin bilişsel düzeylerinin ve yaratıcılıklarının müdahale sonrası istatistiksel olarak pozitif yönde anlamlı değişime uğradığını göstermiştir. Nitel veriler, öğrencilerin müdahale sonrasında otomatizmle ilgili edindikleri teorik bilgi ve uygulama tekniklerini pratiğe aktararak yaratıcılık aşamasında pozitif iyi oluş sağladıklarını göstermiştir.

Anahtar kelimeler: Sanat eğitimi, otomatizm, otomatist teknikler, bilinçdışı, dışavurumcu müzik.

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Art education enhances an individual's critical thinking skills during the artistic production process, thereby fostering creativity (Ames, 2022), and it emerges as one of the fundamental components of art education (Runco & Jaeger, 2012). Individual creativity (Runco, 2024) is associated with imagination (Scherbakova et al. 2024) and possessing critical thinking and questioning skills. Indeed, creativity is also associated with critical thinking and questioning skills in modern education today (Kim et al., 2018; Kuo et al., 2019). Studies emphasize that originality and usefulness are two key components that come to the fore in the creative process (Diedrich et al., 2015; Kaufman, 2016). Simonton (2012) establishes a connection between these two concepts, stating that a work or product is not creative if it is original but not useful, and likewise, it is not creative if it is original but not useful. Therefore, it is important to organize art education content by keeping up with current developments, using different teaching methods, and preparing teaching plans with consideration for the objectives and content in order to develop individuals' imagination and creativity. In line with this idea, Tinto (2017) states that skill-focused lesson plans, alongside content-rich curricula and theoretical knowledge, increase self-confidence and motivation. Moreover, skill-focused lesson plans encourage students to engage in a success-oriented thinking process by creating a quality learning environment (Dunbar et al., 2014; Hilliger et al., 2022). Indeed, as a source of motivation, the interdisciplinary approach emerges as an approach that contributes to the student's active learning process (Evis, 2021; Heaton & Chan, 2023). In this context, it is important for art educators to enrich the content of their teaching plans by integrating their discipline of expertise with different disciplines in the context of interdisciplinary interaction (Miles & Rainbird, 2014).

Studies in the literature continue to increase on the interdisciplinary approach to art education. Recent studies indicate that art finds common ground with different disciplines due to the freedom it offers (Laçınbay and Azılioğlu, 2020). In recent years, creativity has been linked to different disciplines in teacher training curricula (Elisondo, 2025). Similarly, Freedman (2003) describes art as a space of freedom that develops creativity and thinking skills. In this regard, automatism emerges as an important practice and way of thinking, as an emancipating element in artistic creation.

Automatism is a multidimensional term frequently used in disciplines such as literature, art, medicine, law, and psychology (Zemans, 1980; Gokhale & Ramos-Estebanez, 2013). Its active use as an artistic method has been observed since the 19th century. It is defined as actions that occur beyond an individual's capacity for control (Rolnick & Parvizi, 2011). Supporting liberal and innovative forms of expression in literature, it has enabled the inclusion of subconscious experiences in the writing and creative process (Rubin, 1968). Its origins in the field of art are based on the automatic writing technique developed by Andre Breton (Martinez, 2021). Automation brings about literary changes in surrealist literature, strengthening the relationship between psychology and art and bringing the subconscious to the forefront. Therefore, as previously stated, the fundamental ability of free thinking in art is based on the student's ability to improvise and produce randomly, free from the fear of making mistakes (Esman, 2011; Kaplan, 1989; Yılmaz, 2013). In this context, it is stated that the subconscious-focused works of psychologists Pierre Janet and Sigmund Freud influenced automatist artists (Erim et al., 2022). Previous studies have also revealed that

individuals communicate with their true selves with the support of automatism (Hong et al., 2014).

Automatism is a type of expression. The common aspect in both is to activate the creative process through subconsciously supported instantaneous and random formations (Öztürk & Misman, 2023). Indeed, it has also found its place in the art of music as a means of expression (Lessem, 1974; Marwick, 1995). Expressionist music produced with atonal compositions focuses on creating psychological expression by centering on emotional intensity and freedom (Adams, 1995). Therefore, there is a strong relationship between the two as art forms produced by humans. However, the traditional view that every art form has its own “boundaries” limits the creative process (Parung, 2024). Indeed, very early studies have shown that universities separate visual and auditory arts, and that this situation complicates interaction between students and educators (Elderfield & Munro, 1971).

In today's world, collaboration in art has become an important element due to the interrelationships within art (Bernstein, 2000). In this context, when art forms are examined, it is seen that each one contains its own language, message, emotion, and content (Bautista et al., 2016). Therefore, educators should create multiple learning strategies by integrating various art forms in order to enable students to learn deeply about different subjects. This is because developing creativity holds an important place in art education and the curriculum (Wibisono, 2023). Students studying art at university engage in rich dialogue with educators on both theoretical and practical topics. At this point, depending on the course content prepared within the curriculum program, instructors should aim to ensure students' active participation in the learning process by implementing different methodologies and practices (Filimowicz & Tzankova, 2014).

There are studies examining art education in an interdisciplinary context from the perspective of the relationship between painting and music (Pavlou & Athanasiou, 2014; Agdam, 2018; Önal, 2018). In addition, some studies examine the effects of the dialogue between art and automatism on improvisation and reproduction (Sembol, 2012; Kayapınar, 2013; Gör, 2013). A review of the international literature reveals studies that address music-supported artistic production activities (Arlene, 2014). In addition, studies that address automatism and art education from perspectives such as surrealism and media art are noteworthy (Hong et al., 2014; Baudin, 2015). However, a review of the national and international literature reveals that studies on the subject of automatism are insufficient. Studies examining the relationship between painting and music were conducted according to a qualitative research-based literature review model, and no studies were found that examined this topic experimentally. In short, it was determined that there are no studies in the literature that examine the spontaneous and random productions of art education students by addressing automatism, painting, and music together. Therefore, it is believed that this study will be beneficial for undergraduate art education students who express statements such as “I don't know what to do! What should I work on? I have trouble deciding on a subject!” during the artistic production process. In summary, there are various studies on art education and creativity in Turkey. However, there is no study examining the effectiveness of automatism from an interdisciplinary perspective in terms of reflecting students' subconscious and psychology-supported internal expression. In this context, it is

believed that the study will contribute to both national and international literature by presenting an interdisciplinary pedagogical education model supported by expressive music within the scope of automatism, rather than focusing solely on its practices. Based on this idea, the main objective of the study is to reveal the effectiveness of automatism in terms of enabling students to produce creative and original artistic works within the scope of the fine arts workshop painting course. The research questions of our study are as follows.

1. What are the cognitive levels of students regarding automatism before and after education?
2. Is there a significant difference between students' automatist drawing measurements before intervention (pre-test) and after intervention (post-test 1/post-test 2)?
3. What are the students' views on the automatist drawing practice process before the intervention (pre-test)?
4. What are the students' views on the relationship between automatism and artistic creation?
5. What are the students' views on the artistic creation process supported by automatist practice with and without music?

Method

Research Model

The study was conducted using a mixed-methods approach, which allows for the combined use of quantitative and qualitative research methods. In mixed-methods designs, two separate lines of research (qualitative and quantitative research) are combined, integrated, intertwined, and linked (Cresswell, 2020). The study utilized an embedded design that allows for the simultaneous or sequential collection of quantitative and qualitative data and enables the interpretation of these data in a mutually supportive manner. The embedded design reveals the effect of the intervention program planned by the researcher on the experimental results, while the qualitative data show how participants evaluated and perceived the learning processes supported by the intervention program (Creswell, 2020). Therefore, an embedded design was used because the study aimed to quantitatively present the experimental results obtained from the intervention programme and to examine perceptions and evaluations of the implementation process by comparing them.

Participants

The study was conducted at two different state universities located in the Northeast and Central Anatolia regions of Turkey. A criterion sample was used to determine the participants to be included in the study. In studies using criterion sampling, the researcher aims to gain in-depth knowledge about the variables when selecting observation units based on their purpose (Büyüköztürk et al., 2017). In this context, the criteria determined for participants were: (a) being in the “main art workshop (painting) group,” (b) being proficient in applying art techniques, (c) being able to allocate the necessary time for the practical process, and (d) not having previously worked as an automatist. In this context, 17 people who met the necessary

criteria volunteered to participate in the study. Thirteen of the participants were female and four were male, with an average age of 21.

Data Collection Tools

Holistic Grading Rubric

A “Holistic Scoring Key” has been developed to score the pre-test/post-test semi-structured interview questions for determining students' cognitive status regarding the research topic. Students' performance levels have been graded from highest to lowest (4-3-2-1). Four (4) points indicate above expectations/high knowledge level; three (3) points indicate meeting expectations/good achievement level; two (2) points indicate close to expectations/average knowledge level; and one (1) point indicates below expectations/low achievement level (Kutlu et al., 2008).

Rated Rating Scale

A rated rating scale was developed to evaluate the pre-test/post-test 1 and post-test 2 automatist drawing practices of the study. Criteria were first determined for the scale, and an expert opinion form was prepared to determine the suitability of the criteria. The Kappa (κ) statistic was used to determine inter-rater reliability (McHugh, 2012). The analysis resulted in a Kappa value of .746, indicating that the raters were in “significant” agreement. Thus, the measurement criteria (use of color, use of texture, use of technique, automatist expression, plastic effect) were included in the scale. Each criterion is evaluated on a scale of ‘1=Very Weak’, ‘2=Weak’, ‘3=Moderate’, ‘4=Good’, ‘5=Very Good’.

Semi-Structured Interview Form

Interviews were conducted to reveal students' experiences of the music-free and music-accompanied automatist drawing process in relation to the teaching program. The interview technique used in qualitative research (Yıldırım & Şimşek, 2018) enables individuals to convey their experiences from a subjective perspective (Creswell, 2020; Merriam, 2015). While preparing the interview form, existing academic studies in the literature were reviewed and a pool of questions was created. The questions were consulted with two subject matter experts, and the final version of the form was reached. Semi-structured interviews were conducted after each experimental practices.

Automatist Practice Process-Focused Training Program

When preparing the training program, the contents of the Fine Arts Workshop Painting I-II-III-IV-V-VI courses, which are included in the Art Education program at universities within the framework determined by the Higher Education Council (YÖK) in Turkey, were analyzed. In order for the program to achieve its objectives, deficiencies in course content related to automatism and concepts associated with automatism have been linked to art. Within this scope, the teaching program has been designed to support students in producing original and creative artistic works and, in addition, to develop their practical skills. When preparing the program, care was taken to ensure that the topics and content of the areas related to automatism were parallel and comprehensive. The stages, content and outcomes related to the programme process are provided in Table 1.

Table 1

Automatist Practices Process (Training Program)

Automatist Practices Process (Training Program)	
Phase 1	Automatist Drawing Practices (Pre-test)
Content	To engage in expressive automatist art practices without technical, subject, or material limitations; to conduct interviews to determine the cognitive level related to automatism.
Outcomes	It visually conveys one's inner world without any subject or material limitations. It develops critical and questioning skills alongside artistic expression. During the practice process, it enables the acquisition of self-awareness and self-criticism skills based on any problems encountered.
Phase 2	Theoretical Education (Automatism and Practices, Automatist Artists, Psychoanalysis, Art and Psychology, Painting and Music)
Content	Art psychology, psychoanalytic theorists, changes in 20th-century art, and their connection to automatism are examined. The dialogue between painting and music is explored through works of art.
Outcomes	It examines the connection between psychoanalysis and art through works of art. It understands the connections between the artist and social events in the creation of a work of art. It understands the connection between automatism and psychoanalysis and makes inferences about its effects on artists' attitudes.
Phase 3	Practice Education (Automatism, Automatist Artists, Automatist Practices)
Content	The automatist techniques used by automatist artists are demonstrated in practice, and the manner of intervention in random formations is examined.
Outcomes	Understands what tools and equipment are and may be necessary for automatist techniques. Sees the use of artistic materials in the practices of techniques and practices them in their own work. Understands the importance of randomness in the formations that occur on the picture plane and concludes its effects on expression.
Phase 4	Automatist Painting (Post-test 1)
Content	The environment required for automatist imaging is set up, and the researcher conducts the practices. Discussions related to the practices are held.
Outcomes	Understands the importance of automatist techniques in the expression process. Develops self-confidence skills through the freedom offered by automatist techniques. Understands the importance of formations on the picture plane in reflecting momentary emotions during the expression process. Through artistic practices, facilitates technical analysis of works produced by artists using automatist techniques.
Phase 5	Musical Automatist Painting (Post-test 2)
Content	The environment required for the musical automatist painting practices is arranged, motivation, interest, and reactions are observed during the practice phase, and discussions are held regarding both the practice and expressionist music.
Outcomes	The automatist engages in physical movements in accordance with the rhythm of the music during the expression process associated with the painting practices.

They become aware of the impact of the relationship between music and painting on artistic production.

They understand the importance of music in the artistic production process in terms of motivation and the reflection of inner feelings.

Data Collection Process

In the first phase of the study, a “pre-test semi-structured interview” was conducted to determine students' level of knowledge about automatism, and then they were asked to draw automatist pictures. At the end of the four hours, end-of-practice interviews were conducted with the students, asking them to share their experiences. In the second phase, theoretical training was provided on the topics of automatism, automatist practices, automatist artists, expressionist music, painting, and psychology. In this context, the automatist attitudes of artists drawing on psychology and the subconscious, the techniques they use, and their art production processes have been examined. In education, teaching methods such as narration and question-and-answer sessions have been used to increase participants' cognitive and emotional engagement and their sociological and psychological inquiry skills, and to ensure active participation. In the third phase, following theoretical training, automatist techniques (dripping/splattering, scraping, decalcomania, staining) were demonstrated by the researcher through practical practices on a two-dimensional plane (canvas, drawing paper). During the training process, different teaching methods such as narration, demonstration, and demonstration followed by practice were used with the aim of ensuring cognitive awareness. At the end of the training, students were given the opportunity to gain experience by applying the automation techniques they desired. In the fourth phase, students were asked to create an automatist drawing (final test 1) without any restrictions on materials, techniques, or subject matter. At the end of the process, final opinions were collected via the interview form. Finally, in the fifth phase, expressionist music was included in the experimental process. Arnold Schoenberg, who stood out as both a painter and a musician, had his compositions played to the students in rotation at this stage. The process of expressionist music and automatist painting (final test 2) involved observing the practices of automatist techniques, participants' psychological reflections, and the effect of music on physical movements. At the end of the process, students were provided with a semi-structured final test interview. The interviews conducted to determine knowledge levels were scored using a holistic scoring key. Additionally, a post-practice interview was conducted, and a graded scoring scale was used to score the products produced at the end of each practice. The stages related to the data collection process are presented in Table 2.

Table 2

Data Collection Process

Phases	Practices	Time	Teaching Methods	Data Collection Tools
Phase 1	Automatist Drawing (Pre-test 1)	240 minutes	Explanation Practical	Pre-test Semi-Structured Interview Form Graded Scoring Scale Post-Practical Interview Form
Phase 2	Theoretical education	240 minutes	Presentation Discussion Question and Answer Brainstorming	Do not
Phase 3	Practical Education	240 minutes	Explanation Demonstration Demonstration and Practice Question and Answer Discussion	Do not
Phase 4	Automatist Drawing (Post-test 1)	240 minutes	Explanation Practical	Graded Scoring Scale Post-Practical Interview Form
Phase 5	Automatist Drawing with Music (Post-test 2)	240 minutes	Explanation Practical	Post-test Semi-Structured Interview Form Graded Scoring Scale Post-Practical Interview Form

Data Analysis

To examine the time-dependent changes in the effects of automatism on student work (color usage, plastic effect, automatist expression, technical usage, texture usage) through criteria, one-way repeated measures multivariate analysis of variance (One-Way Repeated Measures MANOVA) was used. Since there are five dependent variables and three measurements on a Likert scale, a sample size of at least 15 is required to perform quantitative analysis. As there were 17 participants in the study, the sample size requirement was met. This number is considered sufficient for MANOVA analysis (Todorov & Filzmoser, 2007). Quantitative data were analyzed using the IBM SPSS Statistics 26 software package.

In the analysis of qualitative data, content analysis was performed. In the first stage, the data was transcribed and prepared for analysis. Subsequently, the participants' views were coded into meaningful segments, and code lists were created. Subsequently, themes were created using code lists, and data analysis was performed multiple times to present the themes within a meaningful whole (Miles & Huberman, 1994; Creswell, 2017). Finally, the themes were classified into subcategories, and the subcategories were classified under main categories to complete the analysis of qualitative data (Yıldırım & Şimşek, 2018).

Validity and Reliability

To enhance the reliability of the study, a variety of methods were employed using both quantitative and qualitative data. Quantitative and qualitative data collection tools were finalized based on criteria established with the help of statistical software and expert opinions. Before starting the practice process, students were given a detailed explanation about the work process, and it was stated that participation was voluntary. Qualitative findings are supported by direct quotations from student interviews. Inter-coder agreement percentage was considered when creating categories, themes, and codes (Johnson & Christensen, 2019). To ensure transferability in the study, each stage of the methodology, data collection process, and data analysis has been reported in detail (Cresswell, 2017).

Ethical Procedures

This study was approved by the university's ethics committee. (Ethics Code: E-77082166-302.08.01-332353) on 9 April 2022. Following the ethics committee's approval, a letter was submitted to the faculty administration to obtain research permission. Subsequently, interviews were conducted with the students who would participate in the experimental process. Participant consent was obtained during the study process. Any information that could reveal the participants' identities was kept confidential. The process was completed by assigning codes to the studies and names.

Results

The quantitative and qualitative findings obtained as a result of the study are presented in this section.

Quantitative Findings Obtained from the Evaluation of Participants' Automatist Drawings

Before evaluating the criteria-based scores obtained from participants through the rating scale, skewness and kurtosis coefficients were examined to determine whether the data showed a normal distribution. In this context, the descriptive statistics results for the scale are presented in Table 3.

Table 3

Descriptive Statistics for Graded Rating Scale Criteria

Criteria		N	Mean	Ss	At least	The most	Skewness (Error)	Kurtosis (Error)
Use of Color	Pre-test	17	14.90	4.29	9	21	0.09	-1.31
	Post-test1	17	16.90	3.17	11	22	-0.42	-0.94
	Post-test2	17	19.10	3.57	14	25	0.31	-1.17
Plastic Effect	Pre-test	17	14.50	4.72	7	22	-0.07	-1.13
	Post-test 1	17	17.80	4.24	11	23	-0.50	-1.42
	Post-test 2	17	19.20	4.29	13	25	0.07	-1.49
Automatist	Pre-test	17	11.30	3.93	6	18	0.18	-1.23

Expression	Post-test 1	17	19.40	2.91	13	24	-0.40	-0.21
	Post-test 2	17	20.10	3.82	14	25	-0.25	-1.29
	Pre-test	17	14.60	3.92	8	21	-0.11	-1.05
Technical Usage	Post-test 1	17	18.40	3.22	13	23	-0.24	-1.14
	Post-test 2	17	19.60	3.50	14	25	0.01	-1.41
	Pre-test	17	13.80	3.82	7	20	-0.18	-0.70
Tissue Usage	Post-test 1	17	18.50	4.14	10	24	-0.73	-0.34
	Post-test 2	17	19.10	3.65	11	25	-0.47	-0.20

Table 3 shows that the skewness and kurtosis values of the criteria used to evaluate the images via the graded scoring scale fall within the range [-1;1], and based on this, it was determined that the data set exhibits an approximately normal distribution.

Within the scope of the first sub-objective of the study, a dependent sample t-test was performed to determine the participants' cognitive levels regarding automatism before and after the training. Table 4 shows that the pre-test and post-test measurements, according to the dependent sample t-test results, indicate a statistically significant difference in the participants' knowledge level: $M_{\text{difference}} = 15.294$ (Error = 1.05), $t(16) = 14.574$, $p < 0.001$, $d = 3.535$.

Table 4

Pre-test / Post-test Measurements Related to Participants' Cognitive Levels Regarding Automatism

Measurement	N	M	S	sd	t	p	d
Pre-test	17	15.29	2.995	16	-14.524	<0.001***	3.535
Post-test	17	30.59	3.842				

Note. * $p < 0,05$, ** $p < 0,01$, *** $p < 0,001$

Additionally, Cohen's d was calculated to examine the effectiveness of the intervention between the pre-test and post-test. According to Cohen (1988), effect sizes between 0.2 and 0.5 are classified as small, between 0.5 and 0.8 as medium, and above 0.8 as large. In this context, it was determined that the impact of the educational program intervention on participants' cognitive levels was quite high.

The second sub-objective of the study examined whether there were any significant differences between automatist drawing practices before and after the intervention. Due to repeated measurements and multiple sub-variables, the margin of error may increase in pairwise comparisons. Therefore, Bonferroni correction was applied to calculate a new significance level between pre-test and post-test 1 pairwise comparisons (Polat, 2014)

Table 5

Participants' Automatist Drawing Pre-test / Post-test 1 and Post-test 2 Measurements

Source of Variance	Criteria		Sum of Squares	sd	Mean Squares	F	p	Partial Eta Square
Measurement Time	Colour Usage	Pre-test	68.00	1	68.00	2.97	0.104	0.157
		Post-test 1						
		Post-test 1	80.53	1	80.53	6.24	0.024*	0.281
		Post-test 2						
	Plastic Impact	Pre-test	184.47	1	184.47	8.07	0.012*	0.335
		Post-test 1						
		Post-test 1	33.88	1	33.88	1.12	0.305	0.066
		Post-test 2						
	Automatist Expression	Pre-test	1104.06	1	1104.06	64.25	0.000***	0.801
		Post-test 1						
		Post-test 1	9.94	1	9.94	0.57	0.463	0.034
		Post-test 2						
	Technique Usage	Pre-test	240.94	1	240.94	20.18	0.000***	0.558
		Post-test 1						
		Post-test 1	23.53	1	23.53	1.66	0.216	0.094
		Post-test 2						
	Tissue Usage	Pre-test	376.47	1	376.47	26.24	0.000***	0.621
		Post-test 1						
		Post-test 1	5.88	1	5.88	0.37	0.550	0.023
		Post-test 2						
Error	Colour Usage	Pre-test	366.00	16	22.88			
		Post-test 1						
		Post-test 1	206.47	16	12.90			
		Post-test 2						
	Plastic Impact	Pre-test	365.53	16	22.85			
		Post-test 1						
		Post-test 1	482.12	16	30.13			
		Post-test 2						
	Automatist Expression	Pre-test	274.94	16	17.18			
		Post-test 1						
		Post-test 1	281.06	16	17.57			
		Post-test 2						
	Technique Usage	Pre-test	191.06	16	11.94			
		Post-test 1						
		Post-test 1	226.47	16	14.15			
		Post-test 2						

Tissue Usage	Pre-test			
	Post-test 1	229.53	16	14.35
	Post-test 1			
	Post-test 2	252.12	16	15.76

Note. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$

Table 5 shows that while there was no difference between pre-test and post-test 1 scores in terms of the color criterion ($F(1, 16) = 2.97$, $p = 0.104$), a significant difference was observed between post-test 1 and post-test 2 in favor of post-test 2 ($F(1, 16) = 6.24$, $p = 0.024$). There was a difference between the pre-test and post-test 1 scores in terms of the plastic effect criterion ($F(1, 16) = 8.07$, $p = 0.012$), but no significant difference was found between post-test 1 and post-test 2 ($F(1, 16) = 1.12$, $p = 0.305$). From the perspective of the automatist expression criterion, there was a highly significant difference between the pre-test/post-test 1 measurements ($F(1, 16) = 64.25$, $p = 0.000$), but no significant difference was found between the post-test 1 and post-test 2 scores ($F(1, 16) = 0.57$, $p = 0.463$). In terms of technical usage criteria, a highly significant difference was observed between pre-test 1 and post-test 1 ($F(1, 16) = 20.18$, $p = 0.000$), but no significant difference was observed between post-test 1 and post-test 2 ($F(1, 16) = 1.66$, $p = 0.216$). When viewed from the perspective of tissue usage criteria, there was a highly significant difference between the pre-test and post-test 1 scores ($F(1, 16) = 26.24$, $p = 0.000$). However, no significant difference was found between the post-test 1 and post-test 2 scores ($F(1, 16) = 0.37$, $p = 0.550$).

Effectiveness of the Teaching Program

The effectiveness of the teaching program designed to develop students' original artistic styles was examined by analyzing the partial eta-squared effect size, with each criterion considered individually based on repeated measurements. In this context, color usage, $F(1, 498, 23, 967) = 6.10$, $p = 0.012$, partial $\eta^2 = 0.28$, plastic effect, $F(2, 32) = 6.30$, $p < 0.001$, partial $\eta^2 = 0.28$, automatist expression, $F(2, 32) = 35.25$, $p < 0.001$, partial $\eta^2 = 0.69$, technical use, $F(2, 32) = 12.52$, $p < 0.001$, partial $\eta^2 = 0.44$, and tissue use, $F(2, 32) = 15.18$, $p < 0.001$, partial $\eta^2 = 0.49$, there are significant differences between repeated measurement times. When examining the effect size of the eta-squared obtained from repeated measurements, according to Cohen (1988), effect sizes ranging from 0.01 to 0.06 are classified as small, effect sizes ranging from 0.06 to 0.14 are classified as medium, and effect sizes above 0.14 are classified as large effects. As shown in Table 4, since the eta squares were above 0.14, the teaching program contributed to a significant difference in the effect between the pre-test, post-test 1, and post-test 2 picture practices.

Qualitative Findings Obtained from Participants' Views on the Automatist Drawing Process

Semi-structured interview forms were used to gather students' opinions on automatist drawing practices before and after the intervention, and the data were categorized into categories, subcategories, and themes using content analysis. The categories, subcategories, and themes related to the pre-intervention pre-test practice process are presented in Table 6.

Table 6

Participants' Views on the Automatist Drawing Practical Process Before the Intervention (Pre-Test)

Category	Subcategory	Theme
Expressive Emotions	Positive Emotions	Subjective Well-Being (n = 2), Feeling Excited (n = 2) Enjoyable Work (n = 1), Imaginative Expression (n = 1)
	Negative Emotions	Indecision (n = 4), Fear (n = 3)
	Psychological Reflections	Emotional Change (n = 3), Inability to Express Oneself (n = 2), Psychological Attitude (n = 2), Sociopsychological Problems (n = 2), Need for Self-Actualization (n = 1), Reference to Dreams (n = 1)
	Artistic Performance	Composition Issues (n = 4), Color and Emotion (n = 3)
Momentary Feelings	Ability to Reflect	Ability to reflect (n = 7), Inability to reflect (n = 2),
	Momentary Emotions	Difficulty in reflecting (n = 8)
	Cognitive Expression	Not Knowing What to Do (n = 6), Experiencing Indecision (n = 2), Wasting Time Daydreaming (n = 1), Inability to Generate Ideas (n = 1)
	Psychological Expression	Feeling relaxed (n = 2), Feeling free (n = 1), Boredom during certain stages of the painting (n = 1)
	Artistic Performance	Technical and Practical Inadequacy (n = 1), Feeling Artistic Anxiety (n = 1)

Table 6 presents themes created within the categories of expressive emotions and momentary emotions based on participants' views. The expressive emotions category consists of the subcategories of positive emotions, negative emotions, psychological reflections, and artistic performance. The category of momentary emotions comprises the following subcategories: the ability to reflect on momentary emotions, cognitive expression, psychological expression, and artistic performance. Themes are included under each subcategory, reflecting the views of participants.

Opinions regarding positive feelings about the automatist pre-test image practices

Positive emotions

Regarding the automatist drawing practices before intervention, participants' positive feelings (35.30%) were conveyed through the themes of subjective well-being (n=2), feeling excited (n=2), enjoyable work (n=1), and imaginative expression (n=1).

At this point, K6 stated, *"I tried to convey that the woman's world is positively warm and colorful. I completed my work feeling quite good psychologically"* expressing subjective well-being, K15 *"Thanks to the excitement I felt inside while working on the painting, my brushstrokes became more relaxed. My feelings of excitement dominated the entire painting"*, K7, on the other hand, conveyed that they had a dreamlike experience with the statement, *"I reflected my brush as it came from within me."*

Negative emotions

Participants' negative emotions during the pre-test drawing practice (41.15%) were conveyed through the themes of indecision (n=4) and fear (n=3).

It was observed that participants experienced negative emotions during the instant image production, and it was determined that they experienced indecision and fear during the artistic creation. At this point, K11 emphasized their indecision with the statement, *"First, I felt indecisive. During the work, I felt like I had to move quickly and spontaneously."* emphasized his indecision, while K6 shared his experience, stating

Psychological reflections

The psychological reflections of the participants (64.70%) consisted of the themes of emotional change (n=3), inability to express oneself (n=2), psychological attitude (n=2), sociopsychological problems (n=2), need for self-actualization (n=1), and references to dreams (n=1). When the themes were examined, it was found that the majority of participants had experienced various negative psychological experiences. When sample opinions related to some themes were examined, K17 stated that the practice triggered emotional changes with the statement, *"Even though I experienced constant emotional changes, being free made me feel relieved."* while K9 shared their experience with the statement, *"Expression is not an easy method for me. No ideas or feelings came to mind that I could express. I just scribbled something on the canvas. I did it just for the sake of doing it."* Overall, the themes revealed that the pre-test automatist painting process had different psychological effects on the participants.

Artistic performance

Participants' artistic performances (41.15%) consisted of themes related to composition issues (n=4) and color and emotion (n=3). Opinions emerged regarding participants' technical difficulties from an artistic perspective. For example, K3 stated, *"The free topic was very broad, so hundreds of things crossed my mind, but I didn't know which one to transfer to the canvas and how to compose it,"* expressing their difficulty in composing, while K2 stated, *"I am no longer searching, I am accepting. I wanted to reflect my trembling hands with black. But I expressed my hopefulness and acceptance of this situation with blue and orange colors."*

Opinions on immediate feelings regarding the automatist pre-test

The immediate feelings category consists of the subcategories of reflecting immediate feelings, cognitive expression, psychological expression, and artistic performance. Themes are included under each subcategory to reflect participant opinions.

Ability to reflect immediate emotions

Regarding the automatist drawing practices before intervention, participants' ability to reflect the immediate emotions they experienced was conveyed through the themes of ability to reflect (n=7), inability to reflect (n=2), and difficulty reflecting (n=8).

In this context, K1 stated, *"I expressed my feelings as I wanted to and felt comfortable with the work I did in the workshop,"* while K9 said, *"No ideas came to*

mind. It was very difficult for me. I felt suffocated, my chest tightened. Looking at the blank canvas was torture for me."

Cognitive expression

The cognitive expression subcategory is associated with the themes of not knowing what to do (n=6), experiencing indecision (n=2), spending time imagining (n=1), and being unable to generate ideas (n=1).

As an example of the findings, it emerged that the majority of participants did not know what to do. For example, K3 commented, *"It was a work process I had never tried before, so at first I didn't know what to do,"* while K9 stated, *"No ideas came to mind. It was very difficult for me."* These statements reveal the difficulties participants experienced in the spontaneous creation process.

Psychological expression

The psychological expression subcategory is associated with the subthemes of feeling relaxed (n=2), feeling free (n=2), and feeling bored during certain stages of the painting (n=1).

For example, K1 conveys the inner comfort created by the practice, stating, *"I feel relieved for having done this work."* K3 expresses the freedom offered by the practice, saying, *"I couldn't see exactly what I had imagined in my mind on the canvas, but I was as free as possible and felt this free in front of the canvas for the first time."*

Artistic performance

The artistic performance category is associated with the sub-themes of technical and practical inadequacy (n=1) and feeling artistic anxiety (n=1).

In this context, K10 discovers his technical and practical inadequacies with the experience, *"Because I was working with oil paint, I couldn't achieve certain effects. For me to achieve these effects, the painting needed to dry."* K13 states, *"No matter how expressive I tried to be in my work, I felt a strong artistic concern. Where to place the brushstrokes, which colors to use at what values, etc. This situation may have prevented me from fully expressing myself."* The images obtained from the participants' pre-intervention automatist painting (pre-test) practices are shown in Figure 1.

Figure 1

Images Obtained as a Result of the Automatist Drawing Practices (Pre-test) Before Intervention



Table 7

Participants' Views on the Relationship between Automatism and Artistic Creation

Category	Subcategory	Theme
Automatism and Automatist Practices	Contribution to Artistic Creation	Contributed (n = 17)
	Artistic Development	Perspective (n = 10), Spontaneous Approach (n = 3), Use of Texture (n = 3), Emotional Expression (n = 3), Creativity (n = 2), Colour Expression (n = 2), Ease of Use (n = 2), Self-Confidence (n = 2), Speed (n = 1)
	Psychological Impact	Reflection of the Inner World (n = 2) Momentary Emotional Change (n = 1)

Table 7 lists the subcategories of contribution to artistic creation, artistic development, and psychological impact under the category of automatism and

automatist practices. Student opinions are presented under themes related to these categories.

Contribution to artistic creation

To determine the effect of post-intervention automatist practices on artistic creation, participants were asked whether they contributed to it. In this context, the theme of contributing (n=17) emerged from the participants' views. It was found that all participants gained positive benefits from automation.

Artistic development

Within the artistic development subcategory, the themes of free attitude (n=8), technical skill (n=7), different perspective (n=3), improvisational attitude (n=3), use of texture (n=3), emotional expression (n=3), creativity (n=2), colour expression (n=2), ease of practice (n=2), self-confidence (n=2), and speed (n=2).

For example, K4 said, *"I expressed my immediate feelings sometimes by pouring paint in clumps, sometimes by scraping, and sometimes by adding water to the paint. I felt better and freer."* K9, who previously painted figurative works, conveys that the gains he has made in terms of technical skill have eased the creative process, stating, *"I think that working freely and independently from figures, using different techniques, has greatly developed me and increased my creativity."*

Psychological impact

Under the psychological impact subcategory, the themes of reflection of the inner world (n=2) and momentary emotional change (n=1) emerged.

In this context, K2 stated, *"I utilised automatist techniques more extensively. I believe I employed them with ease. I was able to express the momentary shifts in emotion through automatic painting. Using psychological techniques in the use of colours made me think positively."* K17 stated that thanks to the spontaneity provided by automatist practices, he was able to establish a psychological dialogue with colours. *"Acting without thinking, starting from the immediate effects created on the canvas, triggered both our more immediate emotions and caused more sudden emotional changes."* The images obtained as a result of the participants' intervention in the automatist painting (Post-test 1) practice are presented in Figure 2.

Figure 2

Images Obtained as a Result of the Post-Intervention Automatist Drawing (Post-Test 1) Practices

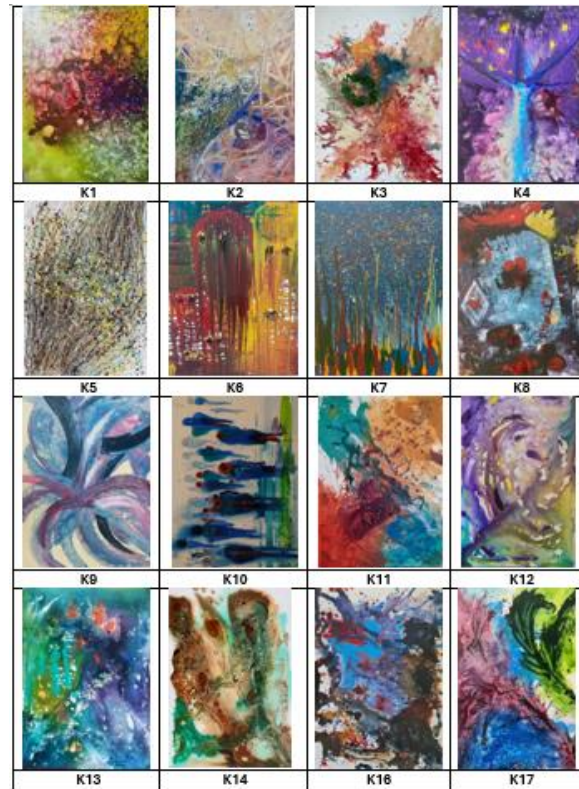


Table 8

Participants' Experiences Regarding the Artistic Creation Process of Expressive Music

Category	Subcategory	Theme
The Creative Process	Automatist Practices with Music	Turning inward (n = 3), Moving to the rhythm (n = 2), Emotional expression (n = 2), Enjoyable (n = 1), Feeling good (n = 1), Feeling free (n = 1), Improvisation (n = 1), Pleasurable (n = 1)
	Automatist Practices without Music	Impressive (n = 2), Relaxing (n = 1)

Table 8 presents participants' experiences regarding the artistic creation process of expressive music incorporated into the environment after the intervention. In this context, subcategories of automatist practices with and without music have been created under the creation process category. Some of the participants' views are presented under themes.

Automatist Practices with Music

Within the scope of the musical automatist practices, the following themes were created: turning inward (n=3), moving to the rhythm (n=2), emotional expression (n=2), enjoyable (n=2), feeling good (n=1), feeling free (n=1), improvisation (n=1), pleasurable (n=1).

For example, K17 emphasised the effectiveness of music, stating, “*I definitely think the music-based practice was more effective. It was effective in helping me turn inward and be alone with myself, and this contributed to my creativity.*” K2’s statement, “*It contributed positively to my creative process. My movements changed according to the rhythm of the music, and it helped me establish a psychological connection.*” K5, on the other hand, stated, “*I believe that working with the musical automaton brought out the feelings hidden in my subconscious. Its ups and downs took me to very different places. I listened to myself without music, but I got bored.*” This view demonstrates that music is effective in awakening subconscious feelings.

Automatist Practices without Music

Within the scope of the music-free automatist practices, two themes emerged: impressive (n=2) and relaxing (n=1).

For example, K7 shared their experience by stating, “*I think it was much better without music,’ while K13 expressed their opinion by saying, ‘Doing the music-free automatist practice relaxed me more.*” In line with general observations, examples of participants automatist drawing exercises before the intervention (pre-test) and after the intervention (post-test 1) and (post-test 2) are presented in Figure 3.

Figure 3

Visuals Obtained as a Result of the Post-Intervention Automatist Picture Practices with Music (Post-test 2)



Discussion

The study aims to examine the effect of automatism on the artistic creation processes of fine art workshop students. In the study conducted using a mixed research method, qualitative and quantitative data were collected and evaluated. In the quantitative dimension, data obtained from images regarding the cognitive level of automatism before and after the intervention were examined, while in the qualitative dimension, opinions regarding the entire process and practice were gathered. In this context, when quantitative and qualitative data are examined, it is seen that students' cognitive levels towards automatism have increased through the teaching programme, that automatism facilitates the emotional and subconscious expression in the expressive process, and that music plays a particularly important role in conveying inner feelings. Furthermore, it has been observed that students display rhythmic behaviour along with music in the practical process.

The initial findings of the study revealed a significant increase in the cognitive levels related to automatism in the experimental group following the intervention. Indeed, when the pre-test automatist drawing were examined, the students' lack of knowledge regarding automatism became apparent through the teaching programme, and the post-intervention images supported this finding. This situation parallels the inadequacy of pre-test practice studies due to students' lack of knowledge about automatism. The current difficulties also demonstrate that automatism, as a creative method, requires not only practice but also structured pedagogical support. Therefore, it supports the view that, in terms of enhancing creativity and developing original style, automation should be implemented not only at the practice level but also with the support of a pedagogically based teaching programme, thereby equipping students with skills. Similarly, Küpeli (2018) planned an educational programme to enable university students to create original works through body-centred art practices and found that the plan brought about meaningful changes in the students. Activities developed within the scope of different teaching programmes have been observed to positively influence students' product creation processes (Canbolat, 2021). Indeed, studies conducted internationally show that students' perceptions related to creativity and their pedagogical inadequacies hinder creativity (Alencar et al., 2017). Therefore, increasing students' cognitive levels through educational programmes parallels positive developments in practice.

Another finding obtained in quantitative terms indicates that the results derived from the graded scoring criterion show that students' post-intervention automatist drawings changed significantly in terms of plastic effect, automatist expression, technical and texture usage criteria compared to their pre-intervention automatist drawings. Gör (2013) examined the effects of automatism on artistic works in the context of locality and universality. In his research, he concluded that automatism was effective in the transition of 20th-century painting from traditionalism to subjectivity and originality, and in revealing the artist's true self. Similarly, Symbol (2012) concluded that the subconscious plays a role in improvisational art practices alongside the use of automatism in art, based on his study of the structural connections of automatism in art. From this perspective, the students' pre-test/post-test 1 automatist painting process experiences are consistent with the findings in the literature.

According to the findings obtained from the qualitative dimension of the study, it was determined that students had low positive feelings towards the expressive process in automatist painting practices before the intervention (pre-test). Moreover, another important finding is that the majority of students are unable to fully reflect their immediate emotions. Previous studies have shown that the expression process parallels the individual's past experiences and imagery (Tarzan, 2010). Recent studies show that artistic creation takes concrete form as an expression of the individual's inner world and observations (Dinçeli, 2020). The study demonstrates that students experience practical difficulties in expression due to theoretical deficiencies during the expression process. In this regard, it is observed that the findings regarding the problems encountered in the expressive process are supported by existing studies in the literature.

Another finding obtained from the qualitative dimension is that all students expressed the view that automatism and automatist techniques contribute to artistic creation. It was also determined that these practices contribute to artistic development in terms of encouraging free expression, developing technical skills, and supporting improvisation and creative forms of expression. The literature states that creative and productive individuals are fuelled by positive emotions rather than momentary feelings (Uz Bař & Soylu, 2018). It is reported that these positive emotions support psychological well-being, enabling individuals to become competent in their field and reach a point of satisfaction (Doğru, 2018). Therefore, it can be said that the educational programme provides students with theoretical knowledge and practical skills, and as a result of positive emotions, meaningful changes occur in the creative processes. This situation is supported by the literature, in parallel with the relationship between positive emotions and creativity. Özdemir (2014) examined the emotional effects of music as a sub-objective in his doctoral thesis study conducted with fine arts high school students based on an interdisciplinary approach. The research revealed that the experimental group students experienced different emotions according to the rhythm of the music and felt liberated.

The final finding obtained from the qualitative dimension is that students found the creative process they carried out with music more meaningful than the practice without music. Students reported that the emotional movement created by music changed their use of colour and that momentary psychological states were reflected in their work as a result of different psychological changes. Özdemir et al. (2014) examined the emotional effects of music in their study conducted with fine arts high school students based on an interdisciplinary approach. The research revealed that the experimental group students experienced different emotions according to the rhythm of the music and felt liberated. According to Akkuř (2007), music, as an abstract art form, can evoke different psychological feelings in individuals, leading them to exhibit different reactions. İmık & Hařhař (2020) also state that music affects individuals holistically and contributes to every aspect of life. In this context, the current findings are supported by studies in the literature on music and emotion.

Conclusions and Recommendations

The study aimed to reveal the effect of automatism on the artistic production of fine arts workshop (painting) students. Conducted using a mixed-method approach, the quantitative dimension of the study employed a single-group pre-test post-test

experimental design model, while the qualitative dimension utilised a case study design. The data collection process was planned according to an embedded design.

The quantitative data obtained from the experimental dimension of the study, which was conducted using a mixed-methods approach, was supported by qualitative data, and the intervention programme was compared with applied studies. According to the findings, the educational programme planned within the scope of automatism has made positive contributions to students' creativity and expression processes. In this context, it has been observed that the planned teaching programme, aimed at increasing theoretical knowledge and practical skills, supports self-confidence during the creative process. Consequently, the student's actions based on self-confidence have also demonstrated that they have reached an acceptable level in terms of knowledge and skills. Along with this, it can be said that pedagogical training provides students with positive gains from a technical perspective, as there were significant changes in the use of colour, texture and technique, as well as in the dimensions of automatist expression and plastic effect, between the work produced by the experimental group before and after the training.

The study gathered opinions on experiences related to the artistic production process based on automatist techniques. The findings revealed that, while reflecting technical and momentary emotions during expression, students did not know what to do due to theoretical and practical deficiencies. However, it has been determined that they experienced the opposite of the existing findings in the post-intervention process. In particular, the findings show that after the intervention, students gained artistic development in areas such as displaying free behaviour along with automatism, gaining different perspectives, using texture and displaying improvisational behaviour, and being able to think quickly. Indeed, the fact that all students believe automatism contributes to their artistic creation supports the quantitative findings.

Finally, opinions were gathered regarding experiences with music-accompanied and music-free automatist painting practices before and after the intervention, within the context of an interdisciplinary approach. Quantitative findings revealed that music created a significant difference only in students' use of colour, but did not bring about any change in terms of plastic effect, automatist expression, technique, or texture usage. Qualitative views on music, however, are the opposite. It has been found that music contributes to students' creative process in terms of turning inward, expressing emotions, moving to the rhythm, and feeling free when improvising.

Limitations and Suggestions for Future Research

The research results present recommendations for students and educators. In order for students to produce original work in the expressive process, they need to develop their thinking skills on topics such as philosophical perspective, psychological experience, sociological issues, etc. Therefore, it is recommended that automatism and automatist practices be taught to students within a basic framework and that related work be continued. From a pedagogical development perspective, the absence of the concept of automatism within the curriculum may create deficiencies in students both theoretically and practically. In this context, automatism and automatist practices within the expressionist framework of contemporary art may be discussed. Another point is that it is recommended to support the creative process by incorporating music genres

that stimulate rhythmic behaviour through auditory stimuli into the production environment.

The research was conducted with a single group, based on a five-week training programme. The reason for conducting it with a single group was the low number of students in the art workshops of the faculty of education. Therefore, if sufficient numbers are reached, studies can be planned with a broad teaching plan using control and experimental groups in subsequent studies. By making greater use of the discipline of psychology associated with automatism, automatist expressions can be achieved through metaphors. Another point is that a retention test was not administered after the intervention programme was completed. It is recommended that retention tests be administered in subsequent studies to examine the continuity of the training plan's retention and effectiveness.

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As responsible authors, **RC**: contributed to the conceptualisation, methodology, validation, formal analysis, resources, writing – original draft, and writing – review & editing; **MY**: contributed to the conceptualisation, methodology, validation, formal analysis, resources, and supervision stages of the study.

Conflicts of Interest

The authors declare that there are no conflicts of interest related to the research, authorship, or publication of this study.

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