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THE EFFECT OF JIGSAW TECHNIQUE IN ART EDUCATION LESSON ON THE EMOTIONAL INTELLIGENCE LEVELS OF UNIVERSITY STUDENTS

Sehran Dilmaç[i]
İzmir Katip Çelebi University,
Faculty of Art and Design,
Basic Art Education Department,
35640 Çiğli, İzmir,
Turkey

Abstract:
This paper was conducted to determine the effect level of the art lesson, which is taught in collaboration with the Jigsaw technique, on the emotional intelligence of undergraduate students. In the research, the pretest-posttest control group pattern of the experimental method was used. The data of the research were collected with the 'Emotional Intelligence Feature Scale Short Form' developed by Petrides and Furnham. The study consists of 30 students, including 15 experimental and 15 control groups, who took applied art education courses at İzmir Katip Çelebi University in the fall semester of the 2019-2020 academic year. Research in the fall semester 2019-2020 academic year in Turkey, Izmir Katip Çelebi University in applied arts course consists of 30 students, including 15 experimental and 15 control group. Shapiro-Wilk test was applied according to test results for each scale regarding whether the study showed normal distribution or not. To examine the difference between the pretest scores of the control and experimental groups, t-test was applied to independent groups and covariance analysis (ANCOVA) was used to examine the significant difference. As a result of the research, it was observed that there was a significant difference in favor of the experimental group between the posttest of the experimental group in which the cooperative learning approach was applied and the post-test mean scores of the groups according to the results of the t-test analysis for the independent samples conducted for the control groups where the activity was not applied.

Keywords: emotional intelligence, art education, cooperative learning

[i] Correspondence: email sehran.dilmac@ikc.edu.tr

1. Introduction

The concept of Emotional Intelligence (EQ), which was first used in the 1990s, is among the skills of the 21st century. These skills include self-awareness, managing emotions, acting oneself, understanding others' feelings, and social skills. It is seen that it is not possible to train the future man with traditional methods in the present day when the fifth industrial revolution was realized, the smart cities were established, the studies on artificial intelligence increased day by day and the process of sending people to other planets began. In addition to having creative and critical thinking, also known as 21st-century skills, having problem-solving skills, learning environments where students are more active in cooperation are needed to raise individuals who can communicate well with their environment and who are aware of their responsibilities. From this point of view, since education is the basic point of individual and community needs, education and training programs should be constantly restructured under the conditions of the age. It can be argued that art education, which enables individuals to produce original works uniquely and creatively, has an important place among the lessons in which 21st-century skills mentioned above can be taught to students. In addition to increasing the creativity of students, it is very important to study art education outside of traditional methods, as well as in other lessons, in terms of permanence in learning, academic success and better preparation of individuals for life. For this reason, learning environments should be arranged in such a way that students can actively participate in the lesson and that students can work together to meet each other's learning deficiencies and establish a positive commitment between them. At this point, with the collaborative learning concept, the individual appears as an approach that helps them learn the information under the guidance of the teacher and discussing with friends. Cooperative learning is a learning approach in which students create small mixed groups in their educational environments, each group helps each other to learn in an academic subject for common problem-solving in parallel with common goals, and is rewarded with different methods by giving importance to group success (Demirel; 2005; Dilmaç and Budancamanak, 2018 Ekinci, 2010). Slavin (1990; 315) stated that learners in cooperative learning should work in small teams, usually consisting of 2-6 people. Each student in these groups tries to develop both themselves and their group friends' capacities to the fullest. Cooperative learning involves multiple techniques. Even though these techniques are similar in terms of forming groups and their general objectives, they differ from each other in terms of arranging the lesson and class. One of these techniques is the Jigsaw technique, which is also referred to as the merging technique in the literature. Jigsaw technique; consists of four main steps: introduction, expert research, report preparation and reformatting, completion and evaluation, and the implementation process is very flexible. Working with the group allows learners to experience their learning experiences such as asking questions, explaining, criticizing, and giving examples by living within the group. The interaction between students with this application will increase the success of the group. For these reasons, it is suggested that it is a very important contemporary learning

method ineffective and permanent learning (Açıkgöz, 2003; Lazarowitz, Lazarowitz & Baird, 1994). The teaching of lessons by traditional methods requires students to try to memorize information instead of understanding information and leads learning to a superficial approach. However, in the cooperative learning approach, it is important not to understand how much the student can remember what he learned, but to understand the qualitative changes in the student's previous knowledge. There are research results in collaborative learning that working with the group in a group prepares the learners for life better thanks to social skills such as sharing, collaboration, and empathy (Johnson & Johnson, 1989; Lampe & Roze, 1996). Therefore, as can be understood from the definitions of emotional intelligence given below, cooperative learning can be thought to have an impact on the development of emotional intelligence. Emotional Intelligence has been a subject that has been investigated by a great number of researchers since the early 1980s. There are various definitions of the concept of emotional intelligence in literature reviews.

A few of these definitions are as follows; to be able to observe and regulate the feelings of the individual himself and others; to use emotions to guide thought and action (Salovey & Mayer, 1990). In Goleman (2001), he defines Emotional Intelligence as the ability to understand one's own emotions, empathize with others' emotions, and regulate their emotions to enrich life. Similarly, Yeşilyaprak (2001) stated that "*recognizing and evaluating the feelings of ourselves and others, responding to them by actively reflecting the knowledge of emotions and the energy of emotions into our daily life and work*". It is seen that these definitions generally focus on concepts such as "*self-control, effort, empathy, and self-motivation*". According to Mayer and Salovey, emotional intelligence is "*to be able to perceive thoughts, reveal emotions to support thoughts, and use emotions effectively to achieve emotional and intellectual development*" (1997: 5). In this definition, it shows that emotions are an element that supports intellectual intelligence. Academic (cognitive) intelligence (IQ) cannot adequately be prepared for the changes and opportunities that life will bring, and to cope with emotional distress (Goleman, 1995). In particular, mental academic support alone is insufficient to add meaningful values to the life of the child (Shapiro, 1998). Besides Yeşilyaprak (2001) similarly emphasized the importance of emotional intelligence in education by stating that school success depends on emotional intelligence as much as academic intelligence. He also underlines that emotional intelligence features such as taking on social responsibility, keeping emotions under control, and cooperating with others by having an optimistic point of view are the necessary behaviors to be successful in school. According to Ortiz and Rodriguez (2011), emotional skills stated that they will increase their academic success by helping individuals to encourage their mental processes and to cope with stress and increase their motivation. Researches show that students with high emotional intelligence develop their skills to manage their emotions such as anxiety and depression appropriately, and their hopelessness decreases, and this situation increases their self-esteem and makes them happy with their work (Asle-fattahi & Najarpo-Orostadi, 2014, Frederickson, Petrides & Simmonds, 2012; Mollah & Jahan, 2012). In addition to these, as a result of the researches carried out by

Shapiro (1998) and Weisinger (1998), they found that EQ has a feature that continues to develop throughout life, unlike IQ.

In the related literature, it has been determined that there are many studies examining different variables related to emotional intelligence in their scans. Some of these studies are as follows; The studies on emotional intelligence and gender variable (Schilling, 1996), researches examining the relationship between emotional intelligence and family relationships (Honig, 2002; Katz and McClellan 1991), studies examining the interaction between emotional intelligence and education (Shapiro, 1998), studies examining the relationship between aggression and emotional intelligence (Freedman, Sears & Carlsmith, 1998; Gürsoy, 2002; Kula, 2008). Researches examining the relationship between assertiveness (self-confidence) and emotional intelligence (Williams & Warchal, 1981), studies examining the relationship between timidity and emotional intelligence (Hye & Kyoung Hoe, 1999; Phelps, LaBar & Spencer, 1997), Researches examining the relationship between emotional intelligence and problem solving and academic achievement (Arlı, Altunay & Yalçınkaya, 2011; Mohzan, Mohd, Hassan, & Halil, 2013), there are researches (Yaşarsoy, 2006) examining the effect of emotional intelligence on behavioral probes of educable mentally handicapped students, and researches in which different education programs are implemented to improve emotional intelligence (Nelis, Quoidbach, et al. 2009). It is seen that experimental pattern method is applied in most of the researches, and many different age groups and individuals participate in the research, from preschool period, university students, patients to mothers. When the research results are examined, it is seen that emotional intelligence has positive results in many of the research topics. In all literature studies, no publication investigating the effect of cooperative learning approaches applied in art education on the emotional intelligence levels of undergraduate students has been found. Therefore, it can be argued that this research is different from other researches conducted in the literature. In the various studies mentioned above, how important emotional intelligence is for the individual has been revealed. Therefore, it is considered important to research on emotional intelligence such as this and to cover different disciplines will contribute to the literature. In line with this idea, the aim of this research is to determine whether the applied art education course, which is taught according to the Jigsaw technique, from the cooperative learning approaches has an effect on the emotional intelligence of undergraduate students studying in different faculties (medicine, pharmacy, health sciences, communication).

2. Methodology

In this section, explanatory information about the purpose of the research, data collection tools, data analysis and the method of the research is included.

2.1. Model of the Research

The experimental design was used as a method in the research. Data were obtained by pretest-posttest experimental control group semi-experimental design. In the research, the method of matching the subjects was preferred in forming the experimental and control groups. While creating the groups, random assignment was made and it was created in a mixed way, and the experimental study with the study group was carried out in 5 weeks. The study group of the study consisted of the elective "Art Practices" course from undergraduate students studying at İzmir Katip Çelebi University in the fall semester of 2019-2020.

2.2. Research Group

It was composed of a total of 30 students, 15 of whom were studying in different faculties (medicine, pharmacy, health sciences, communication) who received the applied arts education (Art Practices) course at İzmir Katip Çelebi University in the fall semester of 2019-2020. Information the created working group is shown in Table 1.

Table 1: Information on the Working Group

Variable			**f**	**%**
Gender	**Experiment**	Female	12	80
		Male	3	20
	Control	Female	10	67
		Male	5	33

2.3. Experimental Process / Application

• The experimental process is separated from the Cooperative Learning Approaches of the unit, and the design elements and principles applied in the "Art Practices" course (repetition, rhythm, contrast, suitability, and harmony, unity, balance-symmetry, sovereignty, point, line, stain, plane and volume, shape, spacing, direction, color, texture). Topics covered, resources, suggestions for solutions to problems encountered, selection of measurement tools, determination of learners who will form the working group, etc. Preparations such as were made before the experimental process.

- In the week before the application, the Emotional Intelligence Feature Scale Short Form was applied as a pretest to both groups. In the next stage, information was given about the unit of design principles and elements in art practices and learning processes were planned with the students.
- Subjects and acquisition areas related to art practices course were examined. The subject contents and target-achievements of this program are 2 hours per week, the subjects of this the unit, which is planned to be processed for a total of 10 hours in five weeks, and the hours allocated for the processing of these subjects were taken into consideration in the research and planning was done accordingly. The subjects of the marbling art and design principles unit and the hours allocated for the subjects are given in Table 2.

Table 2: Subjects in Art Practices Course and Lesson Hours to be Allocated

Topics	Sub-Themes	Duration	Application Week
Description of Art Practices and Materials Used	Design principles and elements.	2 Hours	1. Week
Two-dimensional painting studies/ Naturmort	Rhythm-balance.	2 Hours	2. Weeks
Two-dimensional painting studies/ landscape	Contrast, suitability, and harmony, unity.	2 Hours	3. Weeks
Two-dimensional painting studies/ Human figure drawing	Unity, balance-symmetry.	2 Hours	4. Weeks
Two-dimensional painting studies/ color information	Shape, range, direction, color, texture.	2 Hours	5. Weeks

- The activities were carried out mostly by students, following Jigsaw, one of the Cooperative Learning approaches. Jigsaw students are directed to plan a topic in small groups, to implement that plan, to synthesize the information obtained by reaching the information and to use it in solving the problem. For this reason, the students in the experimental group were asked to form their groups in the way they would like to work with until the end of the research process in line with their interests. As a result, detailed information about Jigsaw, one of the cooperative learning approaches, has been given to the groups to be formed. Sub-topics related to marbling art applications to be handled during the experimental process are given to students who will work in small groups. The researcher has assumed the role of being the source person and facilitator in this process.
- Within the scope of the research, 15 students in the experimental group were divided into three principal groups (AG1, AG2 and AG3), each of which was heterogeneous. After the students in the experimental group formed the main groups, the groups were provided to choose a group chair among themselves. The presidents in the three main groups formed distributed the topics in the units given in table 1 with the aim of researching, learning and teaching their group friends to each student in each group.
- A total of five jigsaw groups were created by placing them in jigsaw groups, as stated in table 3, for the students who received the sub-topic title in each main group, to research and prepare their related topics and to return to their friends who received other sub-topics in their original group, where they will return.

Table 3: Determination of Jigsaw Groups from Main Groups

Principal Groups (tsAG)	Jigsaw Groups (tsJG)
tsAG1 (A1. A2, A3, A4, A5)	tsJG1(A1, B1, C1)
tsAG2 (B1, B2, B3, B4, B5)	tsJG2 (A2, B2, C2)
tsAG3 (C1, C2, C3, C4, C5)	tsJG3 (A3, B3, C3)
	tsJG4 (A4, B4, C4)
	tsJG5 (A5, B5, C5)

Note: tsAG: The main groups of design Elements and A1, A2, A3, A4 and A5 are represented, while tsJG: shows the jigsaw groups of design elements.

- Three students in each jigsaw group consist of students who will study the same topics in their main group. All of the students in these groups were provided to research the topics more deeply, eliminating their shortcomings, eliminating misunderstandings and enabling them to specialize thoroughly in the topics when they return to their original groups. In the second week of the study, the students in the Jigsaw group conducted their studies by discussing their subject research outside the classroom, during the two-hour lesson in the classroom, by brainstorming, teaching their expertise to each other, and preparing a report on the topic they will teach their friends when they go to their main group. In this process, when the students in the Jigsaw group returned to their original groups, all the students returned to their original groups by learning the topics they were going to teach and preparing a uniform report. Thus, all groups were prevented from learning the same things, and learning different and incomplete groups. In the third week of the study, the students, who completed their studies in the jigsaw groups and returned to their original groups explained their sub-topics to their group members in the original groups during the two-hour lesson. Later, in the last two weeks of the study, all the main groups completed their studies by making a thirty-minute group presentations in the class during the two-hour lesson periods. Students in the experimental group were also asked to create an 'Art Practices' group page on *Facebook* so that they could share the visual and literary materials they obtained during the research process. On this page, it is stated that groups can take criticism and suggestions about each other's work, in this way, the group members will be in constant communication with each other and with other groups.
- In the control group, where traditional learning method was applied, lessons were taught with traditional expression method in line with the teacher-centered education approach. At the end of the five-week application, the Emotional Intelligence Feature Scale Short Form was applied to the experimental and control groups as a posttest.

2.4. Data Collection Tools

Quantitative data in the study were collected using the 'Emotional Intelligence Feature Scale Short Form' adapted to Turkish by Deniz, Özer, and Işık (2013) developed by Petrides and Furnham. The Emotional Intelligence Feature Scale Short Form is a scale developed to determine the self-perception level of the individual's emotional competencies (Deniz, Özer, & Işık, 2013). The scale consisting of a total of 30 items and a four-factor (well-being, self-discipline, emotionality, and sociability) structure, designed to measure the total emotional intelligence feature, 7-point Likert type (1: Not agree, 7: Strongly agree) is a measuring tool. The high emotional intelligence total score indicates high emotional intelligence. In different studies, the Cronbach Alpha coefficients ranged from .74-.80 for well-being, .59-.75 for self-control, .66-.69 for emotionality, .60-.69 for

sociability, and .87-.90 for total VET. (Petrides, 2009; Petrides et al., 2010). The high scores mean high emotional intelligence characteristics (Deniz et al. 2013).

2.5. Data Analysis

To measure the emotional intelligence levels of the students taking the marbling art course in the cooperative learning environment, the data obtained from the "Emotional Intelligence Feature Scale Short Form" was encoded and entered into the statistical package program and the analyzes were made through this program. Accordingly, the normality of the scores of the students participating in the experimental and control groups after the application was tested with the Shapiro-Wilk normality test. In the literature, it was recommended to use the Shapiro-Wilk test to test the normality assumption in small samples below 50 people (Rovai, Baker & Ponton, 2014; Shapiro & Wilk, 1965). Statistical analysis was based on $p > 0.05$ significance level.

2.6. Normality analysis of Emotional Intelligence Feature Scale Short Form

Shapiro-Wilk normality test was applied to test whether the students who participated in the experimental and control groups were suitable for the normal distribution after the application. In the literature, it was recommended to use the Shapiro-Wilk test to test the normality assumption in small samples below 50 people (Rovai, Baker & Ponton, 2014; Shapiro & Wilk, 1965). The results obtained from the pre and post-tests of the control and experimental groups for the normality of the distribution is given in Table 4.

Table 4: Shapiro-Wilk Normality Test Results of the Pretest and Posttest Distribution Regarding the Short Form of the Emotional Intelligence Feature Scale of the Experimental and Control Groups

Dimensions	Group	Shapiro-Wilk Normality Test		
		Statistics	Sd	p
Well-being (Pretest)	Control	.834	15	.106
	Experiment	.840	15	.177
Self-discipline (Pretest)	Control	.866	15	.314
	Experiment	.856	15	.342
Sensuality (Pretest)	Control	.800	15	.145
	Experiment	.854	15	.386
Sociability (Pretest)	Control	.813	15	.092
	Experiment	.834	15	.144
Total (Pretest)	Control	.814	15	.131
	Experiment	.834	15	.769
Well-Being (Posttest)	Control	.809	15	.078
	Experiment	.834	15	.355
Self-discipline (Posttest)	Control	.854	15	.312
	Experiment	.834	15	.105
Sensuality (Posttest)	Control	.855	15	.320
	Experiment	.822	15	.058
Sociability (Posttest)	Control	.807	15	.055
	Experiment	.856	15	.342

Total	Control	.866	15	.709
(Posttest)	Experiment	.845	15	.718

As a result of the analysis obtained as a result of the Shapiro-Wilk normality test, the pretest and posttest scores of all students participating in the experimental and control groups were analyzed and the test data for each dimension of the scale had a normal distribution (p> 0.05). In line with the analyzes, the data sets met the assumptions of normality, and as a result of comparing the two groups from the parametric tests, the use of the t-test for independent samples was deemed appropriate. At the same time, based on the two measurement data belonging to this group, it was determined that the single factor covariance analysis (One Factor Analysis of Covariance-ANCOVA) to determine whether there is a the significant difference between the t-test and the pretest-posttest scores for dependent samples in determining the difference between these scores.) has been found suitable for use.

3. Findings

In this section, the analysis of the data obtained as a result of the 'Emotional Intelligence Feature Scale Short Form' to determine the effect of the art lesson conducted in accordance with the Cooperative Learning approach depending on the results of the studies conducted on the control and experimental groups at this stage of the research, on the emotional intelligence (dependent variable) of the undergraduate students. In the study, it was first examined whether there was a significant the difference in terms of equivalence between the mean scores of the experimental and control groups according to the post-test data made before the application. Data analysis related to this is shown in Table 5.

Table 5: Pre-Test Results of Control and Experiment Groups

Dimensions	**Group**	**N**	**X**	**Ss**	**sd**	**t**	**p**
Well-being	Control	15	32.41	1.01	28	.835	.451
	Experiment	15	34.16	1.63			
Self-discipline	Control	15	40.14	1.96	28	1.343	.148
	Experiment	15	41.98	1.74			
Sensuality	Control	15	23.65	1.31	28	1.980	.203
	Experiment	15	22.21	2.21			
Sociability	Control	15	45.32	1.86	28	.854	.890
	Experiment	15	43.94	2.34			
Total	Control	15	44.20	8.21	28	.1000	.412
	Experiment	15	41.88	7.34			

According to Table 5, there was no significant difference in the pre-test scores of the control and experimental groups in terms of overall emotional intelligence scale and its sub-dimensions (t ($_{well-being}$) =, 835; p> 0.05; t ($_{self-discipline}$) = 1.343; p > 0.05; t ($_{sensuality}$) = 1.980; p> 0.05; t ($_{sociability}$) = .854; p> 0.05; t ($_{total}$) = .1000; p> 0.05). According to these results, it can

be said that the pre-test scores of the control and experimental groups are similar. This result shows that the groups are at the same criteria in terms of emotional intelligence levels. Dependent groups t-test was applied to determine whether the pretest and posttest emotional intelligence scores of the control group differ in some way. The results are shown in Table 6.

Table 6: Control Group Pretest and Posttest Results

Dimensions	Group	N	X	Ss	sd	t	p
Well-being	Pretest	15	32.41	1.01	28	.735	.398
	Posttest	15	35.00	1.36			
Self-discipline	Pretest	15	40.14	1.96	28	.741	.265
	Posttest	15	42.55	1.22			
Sensuality	Pretest	15	23.65	1.31	28	.265	.574
	Posttest	15	25.36	1.52			
Sociability	Pretest	15	45.32	1.86	28	.451	.730
	Posttest	15	43.12	1.08			
Total	Pretest	15	44.20	8.21	28	.981	.524
	Posttest	15	41.88	7.34			

When Table 6 is examined, no significant difference was found between the pre-test and post-test scores of the students in the control group in all sub-dimensions of emotional intelligence ($t_{(well\text{-}being)} = .735$; $p > 0.05$; $t_{(self\text{-}discipline)} = .741$; $p > 0.05$; $t_{(sensuality)} = .265$; $p > 0.05$; $t_{(sociability)} = .451$; $p > 0.05$; $t_{(total)} = .981$; $p > 0.05$). Dependent groups t-test was applied to determine whether the scores of the students in the experimental group differed significantly from the pre-test and post-test emotional intelligence scale. The results are shown in Table 7.

Table 7: Experimental Group Pretest and Posttest Results

Dimensions	Group	N	X	Ss	sd	t	p
Well-being	Pretest	15	34.16	1.63	28	.963	.463
	Posttest	15	68.23	2.11			
Self-discipline	Pretest	15	41.98	1.74	28	1.110	.254
	Posttest	15	71.01	2.35			
Sensuality	Pretest	15	22.21	2.21	28	1.741	.325
	Posttest	15	70.81	2.58			
Sociability	Pretest	15	43.94	2.34	28	.746	.655
	Posttest	15	74.87	2.91			
Total	Pretest	15	41.88	7.34	28	.903	.510
	Posttest	15	72.96	3.25			

When Table 7 is examined, a significant difference was found between the pre-test and post-test scores of the students in the experimental group in all sub-dimensions of emotional intelligence ($t_{(well\text{-}being)} = .963$; $p > 0.05$; $t_{(self\text{-}discipline)} = 1.110$; $p > 0.05$; $t_{(sensuality)} = 1.741$; $p > 0.05$; $t_{(sociability)} = .746$; $p > 0.05$; $t_{(total)} = .903$; $p > 0.05$). In the post-test, the emotional intelligence levels of the experimental group significantly increased compared to the pretest.

The mean and corrected values of the the control group and the experimental group for emotional intelligence levels after the experimental application are shown in Table 8.

Table 8: Control and Experimental Group Pretest Results

Dimensions	Group	N	Average	Adjusted Average
Well-being	Pretest	15	40.20	39.14
	Posttest	15	68.23	69.25
Self-discipline	Pretest	15	39.65	39.97
	Posttest	15	71.01	72.28
Sensuality	Pretest	15	23.32	23.52
	Posttest	15	70.81	70.90
Sociability	Pretest	15	28.12	29.10
	Posttest	15	74.87	75.63
Total	Pretest	15	44.93	44.90
	Posttest	15	72.96	73.15

When the data of the t-test analysis calculated independently based on the control and experimental groups given in Table 8., a significant difference was found between the subtest scores of the groups in all sub-dimensions ($t_{(well\text{-}being)}$ =, 711; $p > 0.05$; $t_{(self\text{-}discipline)}$ = 1.201; $p > 0.05$; $t_{(emotionality)}$ = 1.714; $p > 0.05$; $t_{(sociability)}$ = .761; $p > 0.05$; $t_{(total)}$ = -2.401; $p > 0.05$). In this context, when the arithmetic averages of the total scores of both groups are examined, it is understood that the difference that arises is in favor of the experimental group in all sub-dimensions (Experiment = 72.96; Control = 44.93). According to Table 7, the subjective well-being, self-control, emotionality, and sociability subscales of the emotional intelligence scale and the mean scores of the the control group for the overall scale decreased, while the mean scores of the the experimental group increased in the corrected average. Covariance analysis (ANCOVA) was conducted to determine whether the scores obtained from the emotional intelligence levels scale between the experiment and the control group differed significantly and the results are given in Table 9.

Table 9: Control and Experimental Group Post Test ANCOVA Results

Dimensions	Source of Variance	Total of Squares	Sd	Average of Squares	F	P
Well-being	Pre-test (Kovaryete)	4.411	1	4.411	3.810	.045
	Group	**790.988**	**1**	**790.988**	**8.004**	**.799**
	Fault	71.106	27	1.065		
	Total	3178.000	30			
Self-discipline	Pre-test (Kovaryete)	5.371	1	5.371	2.205	.257
	Group	**744.120**	**1**	**744.120**	**8.320**	**.601**
	Fault	120.041	27	3.100		
	Total	2100.000	30			
Sensuality	Pre-test (Kovaryete)	.354	1	.354	.073	.801
	Group	**603.330**	**1**	**603.330**	**7.152**	**.580**
	Fault	105.453	27	2.244		
	Total	1891.000	30			
Sociability	Pre-test (Kovaryete)	3.206	1	3.206	.698	.401
	Group	**526.771**	**1**	**526.771**	**4.621**	**.098**

	Fault	160.102	27	3.217		
	Total	3656.000	30			
Total	Pre-test (Kovaryete)	34.099	1	34.099	.510	.281
	Group	**751.128**	**1**	**751.128**	**7.121**	**.533**
	Fault	2751.959	27	63.221		
	Total	283636.000	30			

When the posttests were checked, a significant difference was found between the mean scores of the experimental and control groups for the total and sub-dimensions of the scale in favor of the experimental group ($t_{(well\text{-}being)} = 8.004$; $p > 0.05$; $t_{(self\text{-}discipline)} = 8.320$; $p > 0.05$; $t_{(sensuality)} = 7.152$; $p > 0.05$; $t_{(sociability)} = 4.621$; $p > 0.05$; $t_{(total)} = 7121.128$; $p > 0.05$). These results show that the education given in the experimental group increased the emotional intelligence levels of the students significantly compared to the control group. It can be said that education given in the light of the data obtained in this research increases the emotional intelligence of the students.

4. Conclusion and Discussion

In the light of the results obtained before the application of the experimental and control groups created from undergraduate students in the research, it has shown that it has the same level criteria in terms of Emotional Intelligence levels. This the situation showed that the experimental and control groups were included in the research equally. Another finding reached in the study was that there was a the significant difference between the posttest of the experimental group in which the cooperative learning approach was applied and the posttest mean scores of the groups according to the results of the t-test analysis for independent samples regarding the control groups where the activity was not applied. When the posttest mean scores of the groups are examined, it is understood that the difference is in favor of the experimental group. These results are different from the results of the primary school, visual arts education course conducted by Erol (2019), which aims to reveal the effect of students on emotional intelligence level. In the study conducted by Erol (2019), no statistically a significant difference was found between the scores of the experimental and control groups from the pretest results. In contrast, the effect of Shapiro (1998), which examines the relationship between emotional intelligence and education, and Arlı, Altunay and Yalçınkaya (2011), which examines the relationship between emotional intelligence and problem solving and academic achievement, on social and mental development as well as academic achievement. researches (Di Fabio & Kenni, 2011; Mun-sawaengsub, Yimklib, Nanthamongkolchai & Apinan-thavech, 2009) and Nelis, Quoidbach et al. 2009 (2009) shows similarities with the results of different training programs implemented to develop Emotional Intelligence.

Research shows that although the cognitive levels of students can be increased to a certain level with teaching processes, it is inadequate in terms of transforming this into an original perspective and lifestyle. This situation can be interpreted as an indication that students are not able to internalize the information they obtain. Educational

processes should be enriched with tools to nurture students' affective worlds. Based on the data obtained as a result of the research, it can be claimed that the most important of these tools is art education. Focusing on the development of the affective domain of the individual, art education is education that is designed to express and design the individual's feelings, thoughts, perceptions, experiences, sensitivity, and creativity with aesthetics. With arts education, individuals are provided with a positive contribution to the development of their effective abilities, enabling them to spend their lives more productively and their lives in satisfaction.

4.1.Suggestıons

It is thought that the findings obtained from the research may contribute to future research. The findings of this research should be evaluated considering the limitations.

- Since the findings of the research are limited to the determined research group, the generalization of the results will only be possible with the researches on the same subject, on different and larger samples. Besides, arts education practices for the development of affective intelligence should be included at every level of education, taking into account the characteristics of the age group. Also, because emotional intelligence is a feature that continues to develop throughout life, practices aimed at improving the emotional the intelligence of students at all levels should be encouraged.
- Emotional intelligence trainings and informative seminars can be organized for faculty members.
- It is suggested that more activities involving emotional intelligence skills take place in the lessons.

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