International Journal of Progressive Education, Volume 15 Number 5, 2019

Development of Creative Thinking Skills of Students Through Journal Writing

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Abstract

This research was conducted in the fourth grade of a private primary school in the province of Gaziantep in the 2018-2019 academic year to provide students with creative thinking skills. This study was carried out as a qualitative case study. 23 students participated in the program. With a two-month study, students were given 23 journal writing topics to develop their creative thinking skills. The students wrote their journals in the school for 5-10 minutes at the beginning of the lessons. At the end of the program students and teachers were asked to write their opinions in the interview form. The data were analyzed by NVIVO 12 for Mac. According to the findings, creative thinking and writing activities have a positive effect on students' development of creative thinking skills. Majority of the students think the program was entertaining while it is seen that female students are more willing than male students.

Key Words: Creativity, creative thinking, creative writing, journal writing

DOI: 10.29329/ijpe.2019.212.15

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INTRODUCTION

Creativity is an important aspect of learning. Thanks to creativity, the student gains a positive attitude towards learning and becomes more fun to learn. Thanks to creativity, the student activates the passive information by converting it into a product. Thanks to the creativity, acquired at a young age, individuals can more easily solve their daily life problems and become more productive in adulthood. This is one of the main aims of education: to make the students well equipped for their future life and to educate them as productive citizens. For this reason, the Ministry of National Education has taken the acquisitions in creative thinking education in schools. According to constructivism, adopted by the Ministry of National Education teachers do not teach in a democratic classroom climate but are leaders. Students express their thoughts freely and discover and produce the knowledge. Societies' development can only be improved in this way.

What is Creativity?

To provide effective thinking skills to students is one of the main objectives of education. Although there have been great changes in the field of education from Socrates to the present day, the effort to give students the ability to think has always been in the core of the education. Approaches which are the theoretical basis of thinking in the process of education can be listed as follows:

- Ancient Greek Education, Perennialism and Educational Approaches of Enlightenment Ages (Ergün, 2015; Özden, 1999; Çakır, 2013; Özden, 1999; Başerer, 2017; Çağlayan Öztürk, 2013; Akyüz, 1992),
- Constructivism (Fidan, 2010; Fer & Cırık, 2006),
- Feuerstein's Instrumental Enrichment Programme (Özüberk, 2002; www.icelp.info/feuerstein),
- CoRT Programme (Bayrak, 2014; De Bono, 2002),
- Cognitive Acceleration Programme (Adey, 1999),
- Lipman's Philosophy Programme for Children (P4C) (Gür, 2011; Lipman, 1980),
- McGuinnes's Children's Thinking Skills Activation (ACTS) (McGuinness, 2000),
- Project Zero Community Artful Thinking (Artful Thinking Final Report, 2006),
- Six Thinking Hats (Koray, 2004),
- Brainstorming (Osborne, 1957).

Creativity is not a concept which has a simple definition. Creativity is the desire of the individual to find an original product or solution. The sense of desire and imagination are the key words of creativity. According to Sternberg and Lubart (1998), originality for creativity alone is inadequate. Torrance (1988) defined creativity as: "The process of sensing difficulties, problems, gaps in information, missing elements, something askew: making guesses and formulating hypotheses about these deficiencies; evaluating and testing these guesses and hypotheses; possibly revising and retesting them and finally communicating the results" (Bartscher, Lawler, Ramirez, & Schinault, 2001; Lubart & Sternberg, 1998)

Creativity emerges as a result of thinking, and one can develop creativity regardless of age. The school environment is one of the most suitable areas for creative thinking education, as long as it is designed with a culture of thinking and this process takes place under the mentorship of a determined teacher. Torrance (1977) emphasizes the importance of ensuring the positive environment that teachers can establish with the students, and the safe environment in which students can

independently express themselves without being judged. Torrance likes to continue the students' answers one after the other, as an unknown adventure. Florida (2004) states that creative students need a more tolerant classroom environment. Respecting students' opinions is essential for a thinking-based education environment. It is recommended by Urban (2007) to develop creativity, with constructive criticisms, errors, tolerances, and humorous classroom environments where students' interests are supported (Honneck, 2016).

Creative Thinking and Education

My education was interrupted only by my schooling, said Churchill. Physicist Michio Kaku says “We are all born as scientists but we often lose our sense of curiosity in our school years.” The school is usually a place where children are molded, academic development is followed, and at the end of the year students are given a report card with grades on them. Shade and Shade (2014) argue that an alternative report card will lead to a huge change on students' creativity. From this point of view, in this report if students' empathy, sense of humor, tolerance, observation, questioning level, self-confidence, imagination, risk taking, persistence, fields of interest, learning power from the mistakes, adaptability, energetic and happiness could be measured and assessed the creative productivity of children would have increased.

It is possible to divide creative thinking into two, like all other kinds of thinking: passive thinking and active thinking. At the end of passive creative thinking there is no action or concrete product. As a matter of fact, most people think in their minds and generate creative ideas every day and every time, but the creative ideas which are not implemented do not mean much. There is an action, a performance after active creative thinking. This action can occur in a very different structure: Works of creativity such as story, poetry, novel, drama, invention, design, painting, problem solving. Of course, the ability of creative thinking alone is not sufficient for the emergence of these products, but at the same time it is necessary to have at least a minimum ability to embody the thought.

It is possible to find a dilemma in a school where creative thinking culture is tried to be placed. Is school the place where creativity is taught, or is it where creative teaching is done? It is expected that teaching methods and techniques will be creative and innovative in a school that has the mission of educating students equipped with creative thinking skills. Students should not be those who learn creativity as an external factor, but rather those who are in the creative environment and continue their education as part of the process. For this reason, a learning environment in which new methods are tried beyond traditional approaches will be a more optimal place.

Research on creativity has shown that humor has a positive effect on the ability to generate a greater quantity of ideas as well as to improve the quality of creative thinking in groups (Shade & Shade, 2016). However, teachers are transforming the learning environment to a more serious place to achieve both classroom management and completion of the curriculum. In addition, homework also aims to consolidate the lessons learned more than to develop students' thinking skills.

Creative Writing

One of the most important skills a school can provide to students is creative writing (Arthur and Zell, 1996). Creative writing is the pouring of thoughts and feelings onto the paper by reconstructing the existing information, concepts, events, sounds in the memory, images, smells, feelings and dreams and associating them with each other (Demir, 2013).

What are the aims of providing students with creative writing skills? Some reasons can be seen below for giving creative writing skills as follows (Maltepe, 2006; Essex, 1995):

- To entertain the children,
- To develop artistic expressions of children,

- Discover the value and function of writing,
- Developing children's imagination,
- To ensure that students are open-minded,
- To teach reading and writing (Cite in. Kaya, 2017).

Although writing is a study in language lesson and literature courses, it is mostly seen as a waste of time in the learning environment based on multiple choice test system. Unfortunately, it would not be wrong to describe creative writing as one of the many targets that could not be reached within the educational program.

The creative writing process takes place in four stages:

- Incubation period: The most complex aspect of the writing work is the incubation period before the need for writing occurs. In this process, the individual reads a lot, takes notes, dreams and develops self-confidence.

- Writing needs: The individual needs to express his / her verbal expression skills in written way. The words, depictions, pictures, and stories that he has accumulated in his mind cling to each other like chains and attempt to transform from an abstract phenomenon into a concrete product.

- Creative thinking: The need for writing leads to a deep reflection on the stories raised in one's mind, internally debates, cause-and-effect relations and a new life in his inner world.

- Creative writing: Beginning with the need of writing and creative thinking process the products such as poetry, stories and fairy tales emerge in this way in simple terms.

For creative writing, it is important that students are encouraged to think unusual, to get rid of their patterns and to think beyond the line of physics. The teacher's in-service training will positively influence the creative writing activity (Eryaman, 2008). Oral's (2003 p. 77) recommendations as a creative writing method in schools are as follows (Cite in Kapar Kuvanç, 2008):

- Nature and sightseeing,
- Museum tours,
- Writing a story by word derivation,
- Writing a script,
- Writing a dialogue,
- Writing with music and photos,
- Creating story characters,
- Writing advertisement texts,
- Dialogues with items,
- Completing the comics,
- Writing surreal stories.

THE PURPOSE OF THE RESEARCH

The aim of this study is to determine the views of students and their teacher about creative thinking activities. The students are expected to gain a creative thinking ability which is one of the major objectives of Ministry of National Education (MoNE). It is hoped that the data to be obtained as a result of this study will contribute to the shaping of the curriculum in primary schools. For the purpose of the study, the following questions were sought:

1. What is the opinion of students involved in creative thinking and journal writing program?

2. What is the opinion of the teacher who participated in creative thinking and journal writing program?

METHOD

This study was carried out by qualitative research methods. The main feature of the qualitative case study is to investigate the depth of one or more conditions. In this methodology, the factors related to the situation are investigated with a holistic approach and focuses on how they affect the situation and how they are affected by the situation. (Yıldırım and Şimşek, 2013). Case study is often used in education. Case studies are multi-perspectival analyses and it is known as a triangulated research strategy (Feagin, Orum, & Sjoberg, 1991). As a means of collecting data from qualitative research patterns in case study observation (structured / open-ended), interview (structured / open-ended) and document analysis are generally used (Yıldırım ve Şimşek, 2013).

Study Group

The research was carried out at a private primary school in 2018-2019 academic year in Gaziantep, which is located in southeastern Turkey and one of the largest cities of the country.

The study group was formed by homogeneous sampling which is one of the purposeful sampling methods. Purposeful sampling is widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest. Although there are several different purposeful sampling strategies, criterion sampling appears to be used most commonly in implementation research (Palinkas and Others, 2013).

Büyüköztürk (2012) describes the homogeneous sampling as the creation of an analogous subgroup of the universe in relation to the problem of the research. This may be the reason why the study group is composed of a school from the upper socio-economic and socio-cultural level.

In this school, creative thinking and creative journal writing activities were performed in a fourth-grade classroom as an experimental study. 23 students of which 9 of them is female and 14 of them is male. Student names are coded in the article by using F or M. While girls are coded with F, the boys are coded with M. Accordingly, FS1 means female student 1 and MS1 refers to male student 1. Their teacher, also participated in the program.

Implementation Process

There are three basic stages of the study:

In the first stage, students were given 200-minute in total thinking and creative thinking training for one week by the researcher. Students have learned about fluency, flexibility, originality and elaboration of creative thinking through activities and games.

In the second stage, a creative journal writing activity consisting of twenty-three themes was carried out. A creative journal notebook was designed by the researcher and copied for the study group students. A creative writing theme was defined for each day. Each student was given a journal notebook. The notebooks were given to the students before the event and they were received after the event. The events were carried out every other day. The writing duration was allocated for the activities was determined as 5-10 minutes.

In the final stage, data collection process was carried out.

Data Collection and Analysis

As the research was prepared in a qualitative design, interviews were used as data collection tools. A structured interview form consisting of eight open-ended questions was given to the students by the researcher. The interview questions were created by literature review. The students filled in the interview form under the supervision of the researcher.

An interview form consisting of seven open-ended questions was prepared to be applied to the teacher. The interview form was sent to the teacher by e-mail and the response was received by email again.

To analyze the interview data, NVIVO 12 for Mac was used. NVIVO is a software program used for qualitative and mixed-methods researches. Specifically, it is used for the analysis of unstructured text including interviews, focus groups, surveys, social media, and journal articles (libguides.library.kent.edu).

Teacher's and students' responses in interview forms were coded with free coding. After a certain period of time (1 month), the codes were revised and the code 195 was reached from the 218 code for students. The number of codes of teacher's interview was 56. Then both researchers had consensus on the codes and categories. Thus, the coding reliability coefficient was calculated as %59 for students' interview and %100 for teacher's interview.

FINDINGS

At the end of the implementation process students were given an interview form in which eight questions were asked. The students' responds were analyzed with NVIVO software and they have been coded. Tables are organized according to interview questions:

Table 1 Students' interview form question 1

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Skills	4	4	8
Development of Writing Skills	2	1	3
Design skill development	2	0	2
Imagination	0	1	1
Reasoning	0	1	1
Complicated thinking	0	1	1
Individual	6	4	10
Perspective	0	2	2
Awareness	0	1	1
Future target	1	0	1
Evolution	1	0	1
Specialization	1	0	1
Group work	1	0	1
Working	1	0	1
Thinking over age group	1	0	1
Because I'm already a creator	0	1	1
Emotional	2	3	5

Entertaining	2	3	5
Effectiveness	10	18	28
Affected creativity	8	12	20
Program positive	1	5	6
A little	1	0	1
It didn't affect creativity	0	1	1
Creativity Components	9	5	14
Flexibility	1	3	4
Fluency	1	2	3
Making life easier	2	0	2
The abstraction of titles	1	0	1
Originality	1	0	1
Elaboration	1	0	1
Maintaining the work	1	0	1
Creative thinking	1	0	1
Total	31	34	65

"Do you think that your creative thinking skills developed at the end of the program? How?" In the analysis of the students' answers to the question five categories are formed: Skills, individual, emotional, effectiveness and creativity components.

In the skills category, students stated that their writing skills were developed, design skills improved, their imagination improved, logical thinking and complicated thinking skills developed. In this category, girls and boys expressed their opinions with an equal number of codes. For example, FS4 said "*I have already started to write a story*." And MS4 said "*I also write an end to the events. For example, a cup has fallen, I think of what will happen and I add my own end.*" He stated that his imagination has improved. In the skill category, female students focused on writing and designing skills, while male students focused on imagination, logical and complicated thinking.

In the individual category, female students talk about future goals, development, specialization, group work, working and thinking over the age group. Male students state that their point of view and awareness develop. One student comes up with saying that he is already creative. In this category, it is observed that female students form more codes than male students. For example, FS6 says "*I think my thoughts are well above my level*." Another student MS8 states that "*My perspective on events changed at the end of the program*."

In the emotional category, five students, two girls and three boys, stated that the program was entertaining. MS7 says "*We have learnt it with fun*."

In the effectiveness category, female students used 10 codes and male students 18 codes. While nine students stated the program influenced them in a positive way, FS3 stated that "*Thanks to this program my creative thinking skills may have increased slightly*." Male students' 17 codes out of 18 show positive effect. MS13 says "*I am already a creator*." Another student MS3 says "*I have started doing more sensible things*."

In the creativity components category, female students produced more codes than male students. They stated that in addition to the dimensions of flexibility, fluency, originality and elaboration in their creative thinking skills, the elements that facilitate their daily lives, abstract thinking, sustaining something they do and their creative thinking also developed. In this category, the main difference between female students and male students is that male students use only two dimensions of creativity (flexibility and fluency) as codes, while female students use codes in 8 dimensions. In this category, FS2 says "*I can imagine what I see in a more detailed way.*" and MS11 says "*I always figure out different and innovative thoughts*."

In the first question of the interview form, nine female students created 31 codes, 14 male students created 34 codes. In total twenty-three students expressed their opinions with 65 codes. 62 codes out of these 65 codes show that students have developed their creative thinking skills.

Table 2 Students' interview form question 2

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Skills	3	1	4
Analyzing	0	1	1
Imagination	2	0	2
Story writing	1	0	1
Individual	5	3	8
Open mind	1	0	1
Active use	1	0	1
Good understanding	0	1	1
Doing work on your own	1	0	1
Being creative	1	0	1
Previous situation	1	1	2
I'm already creative	0	1	1
Creativity Components	6	12	18
Fluency	0	1	1
Flexibility	0	3	3
Originality	3	4	7
Elaboration	0	1	1
Problem solving	1	0	1
Creativity development	2	3	5
Emotional	3	2	5
Entertaining	1	1	2
I love creative thinking	1	0	1
Beautiful	1	1	2
Effectiveness	10	15	25
Helpful	1	1	2
No	0	1	1
Creative writing positive	9	12	21
Development	0	2	2
Total	27	33	60

"Do you think that your creative thinking skill develops through creative writing? Explain." In the analysis of the students' answers to the question five categories are formed: Skills, individual, creativity components, emotional and effectiveness.

In the skills category, students expressed that they have developed their skills in analyzing, imagination and story writing. In this category, female students with three codes and male students expressed their thoughts with one code. For example, FS1 "*These creative thinking and writing activities have brought more imagination to me. I almost never dreamed before this work. But now I can dream more.*" And MS1 says "*I am able to understand and analyze a sentence or a paragraph better and interpret it.*"

In the individual category, it was seen that students' mind was open, active use, good comprehension, working on their own, being creative, previous situation, already being the creator codes. Female students produced more codes than male students. seven codes out of the eight codes in this category expresses the development, while a student said "*I am already a creative person."*

In the creativity components category, it was seen that the students included codes of fluency, flexibility, originality, elaboration, problem solving and creativity development. Male students produced more codes than female students. In all of the 18 codes in this category, students stated that creative thinking skills developed with creative writing skills, too. For instance, FS6 "*With this event,*

we produce new ideas in five minutes and write these ideas in a way that nobody can think of. Thus, we can find solutions to problems in a short time."

In the emotional category, five students (three girls and two boys) expressed their feelings about the program. The students stated that the program was entertaining, they loved creative thinking and it was beautiful.

In the effectiveness category, the female students used 10 codes and the male students used 15 codes. 24 codes out of the 25 codes consist of opinions that are useful, positive and development, only one code has a negative expression. MS12 says "*These activities enabled me to think creatively while doing creative writing and to write creatively while doing creative thinking.*" He stated that creative thinking and creative writing affect each other.

In the second question of the interview form, nine female students created 27 codes and fourteen male students created 33 codes. Twenty-three students expressed their opinions with 60 codes in total. 58 codes out of the 60 codes indicate that students' creative thinking skills have improved.

Table 3 Students' interview form question 3

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Skills	5	9	14
Development of dreams	0	3	3
Writing skills	1	2	3
General skills	0	1	1
Quick decision making	1	0	1
Development of musical aspect	1	0	1
Development of art aspect	1	0	1
To be able to analyse	0	1	1
Uncovering skills	1	0	1
Quick thinking	0	1	1
Better Thinking	0	1	1
Individual	5	4	9
I can stand on my own feet	1	0	1
I'm doing better things	1	0	1
Beyond the memorization	0	1	1
Fluent speech	1	0	1
Influencing	1	0	1
Ability to Express	1	0	1
Will make a great contribution to our lives	0	1	1
Beyond the first thought	0	1	1
Increasing intelligence	0	1	1
Emotional	2	3	5
Entertaining	2	3	5
Effectiveness	2	3	5
No negative aspects	2	3	5
Creativity Components	3	11	14
Creative thinking	0	7	7
Flexibility	1	1	2
Idea generation	2	0	2
Originality	0	2	2
Design	0	1	1
Negative Aspects	10	10	20
Back from courses	3	2	5
Feeling the pressure	0	3	3
Sometimes strain	1	2	3
Taking time from courses	2	0	2
Boring	0	2	2
I'm getting a little tired	1	0	1
Too little time for events	0	1	1
Inadequate development	1	0	1

No impact on people	1	0	1
Dislike writing	1	0	1
Total	27	40	67

In the analysis of the answers given to the question: "What are your positive and negative opinions about creative thinking and writing activities?" there are six categories: Skills, individual, emotional, effectiveness, creativity components and negative aspects.

In the skills category, students think that they have acquired skills such as development of dreams, writing skills, general skills, rapid decision making, development of musical aspects, development of art aspects, analyzing, revealing skills, quick thinking and better thinking. In this category, girls expressed the development of their skills with five codes and boys with nine codes. FS2 says, "*I'm going to an art course and the paintings I am making are different. I play the piano; I can develop the melodies of the works*." MS6 says, "*It made us think better because I don't write the first things in my mind when I am supposed to write*." The students stated that their skills improved.

In the individual category, students gave the following statements in order to emphasize the positive aspects of the program: I can stand on my own feet, do better things, beyond the memorization, have a fluent speech, have an effect, the ability to express yourself, made a great contribution to our lives, beyond the first thought, increasing intelligence. Female students with five codes, male students with four codes stated that they developed their individual skills. FS5 says "I can express myself in the best way". MS8 says that "*Creative thinking has taught me to be original and to learn beyond memorization.*" They say that the program has contributed an individual development.

In the emotional category, five students (two girls and three boys) stated that they found the program entertaining. FS3 says "*I'm having a lot of fun because most of the journal writing topics are my favors, and I like it*." MS7 says, "*It makes me happy because it's like there is a magic in it."* he said.

Five students in the effectiveness category stated that the program did not have any negative aspect. One of the students MS5 says, "*I have no negative opinion. I have positive opinions: We have increased our creative thinking and eventually we can make inventions in the future or develop our dreams.*"

In the category of creativity components, it is seen that male students make more evaluations than female students with 11 codes. seven male students stated that their creative thinking skills have improved. In this category, creative thinking, flexibility, idea generation, originality and design dimensions are expressed. Female student FS4 says "*I think that creative thinking activities make difference. Adults expect the little ones to do easy things. Therefore, speaking and writing skills are noticed at later ages. This program also revealed our skills*."

In the negative aspect category, girls and boys reported equal number of expressions. To be behind of the other lessons and to force themselves to create a creative article are the prominent expressions. Female student FS6 says "*I wish we could have a separate course for this program instead of taking time from other lessons.*" Another student MS3 says "*There is too little time for activities.*"

In the third question of the interview form, nine female students created 27 codes, fourteen male students created 40 codes. Twenty-three students expressed their opinions with 67 codes in total. 47 codes out of the 67 codes indicate that students have a positive impact on their creative thinking skills.

Table 4 Students' interview form question 4

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Academic	2	1	3
Meaningful learning	0	1	1
Good learning	1	0	1
Innovative learning	1	0	1
Skills	1	2	3
Writing different things	0	1	1
Thinking of different stories	0	1	1
Creating games	1	0	1
Individual	2	1	3
Self-development	1	1	2
Building irrelevant relationship	1	0	1
Emotional	2	0	2
Love	2	0	2
Effectiveness	9	14	23
Imagination generation	9	13	22
Not appeal to my imagination	0	1	1
Creativity Components	3	4	7
Creative thoughts	1	2	3
Fluency	0	2	2
Flexibility	1	0	1
Elaboration	1	0	1
Time & Setting	5	2	7
Everywhere	1	0	1
At home	0	1	1
Every day	1	0	1
While reading	1	0	1
While listening to music	1	0	1
While having a dream	0	1	1
While sleeping	1	0	1
Total	24	24	48

In the analysis of the answers given to the question: "Do you think that creative thinking and writing activity improves your imagination? Explain, how it is." There are seven categories in total: academic, skills, individual, emotional, effectiveness, creativity components and time & setting.

In the academic category, students mention about the effects of meaningful learning, good learning and innovative learning. FS4 says "*I imagine while reading books and studying lessons."* She stated that the development of her imagination has also affected her academic development.

In the skills category, the students think that they have acquired skills such as writing different things, thinking of different stories and creating games. FS8 "*We get bored while playing games with my friends, we're having fun creating some games. My friends sometimes flatter me for the games I make up.*" Students states that their daily life skills have improved.

In the individual category, students state that their skills of self-development and irrelevant relationships developed. FS3 says "I can turn things into irrelevant things and it helps me to imagine while looking at the ceiling before I sleep."

In the emotional category, two students express that they love imagining. Another student FS1 says "I loved imagining; I imagine everywhere."

In the effectiveness category, nine girls and fourteen boys have created 23 codes. While 22 of these codes show that the program develops their imagination, one of them states that the program does not address to his imagination. MS4 says "Imagination directly affects creativity. If we want to be creative, we have to develop imagination. I think that the aim is to develop our imagination."

In the category of creativity components, seven students talk about creative ideas, fluency, flexibility and elaboration dimensions. FS7 says “In fact, my imagination is not good and I can't find different ideas. After this program, I can imagine and find different ideas easily.” Another student MS12 says “This number is now twenty and above, as I used to have only ten thoughts on a topic.”

In Time & Setting category, five female students and two male students created codes. Through this program, students point that they have more imagination in different times and settings. MS11 says "*Sometimes I go home and look at the blue light and make up cartoons*."

In the fourth question of the interview form, nine female students created 24 codes, fourteen male students created 24 codes. Twenty-three students expressed their opinions with 48 codes in total. 47 codes out of the 48 codes indicate that the creative thinking and writing activity of the students had a positive effect on the development of their imagination.

Table 5 Students’ interview form question 5

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Simplicity	12	16	28
Educational Process	2	2	4
Writing and thinking	1	0	1
Getting accustomed	0	1	1
Pleasant	0	1	1
Like an author	1	0	1
Educational Content	4	9	13
No difficulty	2	2	4
Easy activities	1	3	4
Appropriate topics	0	2	2
Fewness of the activities	0	1	1
Difficulty is better than easiness	0	1	1
Area of interest	1	0	1
Output	6	5	11
Idea generation	3	1	4
Imagination	0	2	2
Creative thoughts	0	2	2
Objectivity	1	0	1
Pure thoughts	1	0	1
Improvement	1	0	1
Difficulty	7	15	22
Education Process	3	4	7
Timing anxiety	0	2	2
Difficulties to associate sentences	1	0	1
Nothing comes to mind	1	0	1
Getting tired while writing	1	0	1
Imagination and the strain of the brain	0	1	1
Getting bored	0	1	1
Educational Content	1	6	7
Having difficulty at activities	0	3	3
Having difficulty at early topics	0	2	2
Not much easiness	1	1	2
Output	3	5	8
Originality	1	2	3
New ideas generation	0	2	2
Having difficulty at expression	1	0	1
Inadequate learning	1	0	1
Having difficulty at creativity	0	1	1
Total	19	31	50

In the analysis of the answers given to the question: “What are the challenges of creative thinking and writing? Explain.” In the analysis of the answers to the question three codes under two

headings "simplicity" and "difficulty" has been formed. These codes are educational process, educational content and output. Under the title of simplicity, female students included 12 and male students included 16 statements. Under the title of difficulty, female students included 7 statements and male students included 15 statements. Accordingly, it can be said that male students found the program more difficult than female students.

In the educational process category under the title of simplicity, they have expressed their thoughts with four codes such as writing and thinking, getting accustomed, pleasant and like an author. Under the title of difficulty, the students included statements about the educational process in terms of timing anxiety, difficulties to associate sentences, nothing comes to mind, getting tired while writing, imagination and the strain of the brain.

In the educational content category under the heading of simplicity, it was seen that male students express more simplicity about the program than female students. In the educational process under the title difficulty, female students express their opinions with one code and male students with six codes. MS4 says "*It was simple because the topics were appropriate for children. I had never done anything like this before in my life, so I might not be creative enough. I think difficulty is good because everyone can do the easy things*."

In the output category under the title of simplicity, students state a total of 11 codes, consisting of idea generation, imagination, creative thoughts, objectivity, pure thoughts, improvement. In the category of outputs under the title of difficulty, they stated a total of eight codes consisting of originality, new ideas generation, having difficulty in expression, inadequate learning, having difficulty at creativity.

In the fifth question of the interview form, nine female students created 19 codes and fourteen male students created 31 codes. Twenty-three students expressed their opinions with 50 codes. Out of the 50 codes, 28 codes were under simplicity and 22 codes were under difficulty.

Table 6 Students' interview form question 6

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Emotional	0	2	2
Entertaining	0	1	1
Dislike	0	1	1
Effectiveness	9	12	21
Yes, I do	9	11	20
No, I don't	0	1	1
Creativity Components	1	2	3
Fluency	1	1	2
Originality	0	1	1
Output	7	10	17
Different perspective	0	5	5
Solution generation	1	1	2
Environmental awareness	0	2	2
Creating a scenario	1	0	1
Thinking fast	0	1	1
Good for people	1	0	1
Understanding people easily	0	1	1
Speaking	1	0	1
Ordinary and Different perspective	1	0	1
Exploring the ordinary	1	0	1
Creative writing	1	0	1
Reviving the mind	0	1	1
Total	17	26	43

In the analysis of the answers given to the question: "Do you think that creative thinking can contribute to develop a different perspective on what is happening around you? How?" In the analysis

of the answers to the question, four categories were formed: Emotional, effectiveness, creative components and output.

In the emotional category, female students have not included any statements. A male student says that the program was entertaining while a complicated male student says "*I don't like it very much, but it was fun so I don't like it very much. Actually, I like it, but it's very complicated*."

In the effectiveness category, all of the female students state that creative thinking program has contributed them to develop a different perspective on what is happening around them while 11 male students out of the 14 male students say "*Yes*" and only a male student says "*No*." Female student FS2 says "*The creative thinking skills helped me to develop a different perspective. As I am the leader of the student community, I have to produce innovative projects*."

In creativity components category, a student mentions about fluency and two students mentions about originality dimensions.

In the output category, seven female students and ten male students stated that they have developed a different perspective. MS3 says "*I was leaving the hard stuff unfinished. Now I'm trying to find solutions by thinking of different aspects*." Another student FS4 says "*I make up scenarios in my head.*"

In the sixth question of the interview form, nine female students created 17 codes and fourteen male students created 26 codes. Twenty-three students expressed their opinions with 43 codes. Out of 43 codes 41 codes indicate that the program developed different perspective on what is happening in their environment.

Table 7 Students' interview form question 7

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Effectiveness	9	14	23
Yes	7	12	19
Partially	2	1	3
No	0	1	1
Output	11	12	23
Solution generation	8	8	16
Creativity at lessons	1	2	3
Various idea generation	0	2	2
Future effectiveness	1	0	1
Making easy decisions	1	0	1
Total	20	26	46

In the analysis of the answers given to the question: "Has creative thinking and writing program made an impact in solving the problems you face in your daily life? Can you give an example?" two categories have been created: Effectiveness and output.

In the effectiveness category, seven female students say "*Yes*" and two female students say "*Partially*". When it comes to boys, 12 male students say "*Yes*" and a male student say "*Partially*" and a student say "*No*". MS4 says, "*For instance, one day my sister was sick, she couldn't get any water. We were not always at home so we were not able to help her. I filled some water in a bottle and connected the straws to her*."

There are total of 23 codes in the output category which includes Solution generation, creativity at lessons, various idea generation, future effectiveness and making easy decisions. MS8 says "*Formerly in a discussion, whoever made sense, I found him right but now I listen to both sides and whoever is wrong, I find him faulty*."

In the seventh question of the interview form, nine female students created 20 codes and fourteen male students created 26 codes. Twenty-three students expressed their opinions with 46 codes. Out of 46 codes, 42 codes indicate that the program developed an impact in solving the problems students face in their daily lives.

Table 8 Students' interview form question 8

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Educational Process	3	6	9
Longer time for the activities	1	2	3
Longer time for the program	0	2	2
More entertaining	1	1	2
Everyday	0	1	1
Smartphone and tablet	0	1	1
More idea generation	0	1	1
Art and music	1	0	1
Educational Content	9	12	21
Various activities	3	2	5
More activities	2	1	3
Different topics	1	1	2
Difficult activities	0	2	2
Pictures	1	0	1
More imagination	0	1	1
Picture interpretation	0	1	1
Creative thinking and writing	0	1	1
From easy to difficult	1	0	1
Videos	0	1	1
More space for writing	0	1	1
More entertaining	1	0	1
More extraordinary activities	0	1	1
General	10	2	12
All students	3	0	3
All classrooms	2	0	2
Not necessary	1	0	1
Hobby	1	0	1
Free activities	0	1	1
All schools	1	0	1
Separate lesson	0	1	1
Periodically	1	0	1
For the parents	1	0	1
For the teachers	1	0	1
Creativity Components	0	2	2
Flexibility	0	1	1
Originality	0	1	1
Total	22	22	44

In the analysis of students' answers to the question: "What are your suggestions for the further development of the creative thinking and writing program?" there have been four categories in total: the educational process, educational content, general and creativity components.

In the educational process category, female students created three codes and male students created six codes. Suggestions of the students about the educational process are as follows: Activity time should be longer, program duration should be longer, it should be more entertaining, such activities should be done every day, it can be done by smartphone and tablet, there must be more idea generation and there must be music within the program.

In the educational content category, the female students created nine codes and male students created 12 codes. According to the students the program should have; various activities, more activities, different topics, difficult activities, pictures, more imagination, picture interpretation,

creative thinking and writing, videos, more space for writing, more extraordinary activities and should be more entertaining, from easy to difficult activities.

In the general category, female students created 10 codes and male students created two codes. According to the students the program should be applied to all students, in all classes and in all schools. Teachers and parents should have the same program.

In the category of creativity, two male students mentioned about the fluency and originality dimensions.

In the eighth question of the interview form, nine female students created 22 codes and fourteen male students created 22 codes. Twenty-three students expressed their opinions with 44 codes. Out of 44 codes, 43 codes indicate that the students have expressed their suggestions for the continuation of the program.

Table 9 Students' interview forms all questions total codes and averages according to genders

Categories and Codes	Girls (n=9)	Boys (n=14)	Total (n=23)
Question 1	31	34	65
Question 2	27	33	60
Question 3	27	40	67
Question 4	24	24	48
Question 5	19	31	50
Question 6	17	26	43
Question 7	20	26	46
Question 8	22	22	44
Total	187	236	423
Average	20,77	16,85	18,39

When the coding of all the questions in the student interview form was analyzed according to the female and male students, the female students created a total of 187 codes. The average coding rate per female student is 20,77. Male students had a total of 236 coding. The average coding rate per male student is 16,85. According to this data, female students have created more codes than male students.

Table 10Students' interview forms all questions total codes and percentage

Categories and Codes	Total Codes (n=23)	Positive Codes
Question 1	65	62
Question 2	60	58
Question 3	67	47
Question 4	48	47
Question 5	50	28
Question 6	43	41
Question 7	46	42
Question 8	44	43
Total	423	368
Percentage		86,99

A total of 423 codes were obtained from the responses to all the questions in the student interview form. It was seen that 368 of all codes contained a positive approach for the program. According to this data, students have a positive approach about the program, coding rate was determined as 86.99. "*Yes, positive and easy*" expressions were taken into consideration in encodings with positive approach. "*No, partially, negative* and *difficult*" statements are not taken into consideration.

Table 11 Teacher interview form question 1

Codes	N
Positive development	1
Different perspective	1
Problem solving	1
All-round evaluation	1
Self confidence	1

The creative thinking and writing program was carried out with an elementary school teacher in a class of twenty-three students. In the analysis of teacher's answer to the first question: "Do you think that your students' creative thinking skills have improved in general? How?" there have been five codes. Teacher says "*I think that there are positive developments. Different perspectives emerged. I have observed that they do multidimensional evaluations. I think that students are more active at problem solving. Having them in a different study has also given them self-confidence."*

Table 12 Teacher interview form question 2

Codes	N
Excited	1
Eager	1
Positive development	1
Positive behaviors	1
Difficult	1
Imagination	1
Prefer creative writing	1

In the analysis of teacher's answer to the second question: "How is the students' participation in creative thinking and writing activities according to your observations?" seven codes were obtained. Teacher says "*I have observed that they are eager and excited. I feel that they have positive developments at their behaviors after the program. I think, students prefer creative writing activities more than other writing activities. The program is challenging*."

Table 13 Teacher interview form question 3

Codes	N
Some girls continue the activities	1
Appropriate for female students	1
Girls more desirous	1
Girls more eager	1

In the analysis of teacher's answer to the third question: "How are your female students participating in creative thinking and writing activities?" 4 codes were obtained. Teacher says "*Our female students were more desirous and eager to participate in the program than male students. Some of my female students want to be a writer when they grow up, this activity has been most beneficial for them. I know from my female students that there are those who continue these activities in the house on their own*."

Table 14 Teacher interview form question 4

Codes	N
Different perspective	1
Participation satisfying	1
Positive effect	1
Persistence	1
They don't like writing much	1

In the analysis of teacher's answer to the fourth question: "How are your male students participating in creative thinking and writing activities?" Five codes were obtained. Teacher says "*I*

think that male students are also affected positively. I have observed that they evaluate issues from different perspectives. Their persistence in this event was very good. I can't say that they love writing, but their participation in the events was very satisfying."

Table 15 Teacher interview form question 5

Codes	N
Interesting	1
Beyond the limits	1
Appropriate	1
Achievement	1

In the analysis of teacher's answer to the fifth question: "Are creative thinking activity topics appropriate to the level of your students?" four codes were obtained. Teacher says "*Activity subjects are appropriate for the students' level. Particularly creative thinking topics were also very interesting. When the children are challenged, they are trying to go beyond their limits and they realized that they can achieve if they try hard*."

Table 16 Teacher interview form question 6

Codes	N
Extra time	2
Creativity dimensions	1
They do their best	1
Duration is OK	1
They used the duration well	1

In the analysis of teacher's answer to the sixth question: "Is the duration, 5-10 minutes sufficient for creative thinking and writing?" six codes were obtained. Teacher says "*I observed that an average of 5-10 minutes is sufficient. However, depending on the journal topic, they needed more time. I realized that students use the duration until the last second. I also witnessed that they always wanted additional time with excitement. I think they are trying to do their best in such a short time*."

Table 17 Teacher interview form question 7

Codes	N
Pleasant	1
All classrooms	1
Difficulty at the beginning	1
Entertaining	1
Effects of environment	1
Imagination	1
Questioning what they learn	1
Objections at end of the program	1
A boy and a girl were bored	1
Difficult but fun	1
Feeling special	1

In the analysis of teacher's answer to the seventh question: "How are your students' reactions about creative thinking and writing activities in general?" 11 codes were obtained. Teacher says "*They had difficulties at the beginning. I think that it is the effect of the family, environment and education system. During the program I observed that their imagination skills also improved. Their participation in the program caused them to feel special when they were doing something special. They enjoyed the participation of the researcher in the classes. When the program ended, most of the children objected. This is an indication that my students enjoy the activities. Some students said that this program should be in all classes. Only a girl and a boy said that they found the program boring. In general, my students stated that some activities were difficult but fun in general*."

DISCUSSION

Results from this study indicates that almost all students state, they had an improvement at some skills such as creativity, writing, imagination, flexibility, fluency, originality, elaboration, problem solving, analyzing, making decisions, expressing themselves and objectivity. Almost all of the students think that Creative Thinking and Journal Writing (CTJW) program has a positive impact on them and it is also entertaining. Thanks to the CTJW program students feel that they can generate creative ideas. According to Fleight's (2010) research indicates that the majority of students think that they have creativity and opportunities to develop their creativity in the classroom. They consider the writing lab, drawing, reading and free time activities are the most creative moments in their classroom.

A total of 423 codes were obtained from the responses to all the questions in the student interview form. It was seen that 368 of all codes contained a positive approach for the program. According to this data, students have a positive approach about the program, coding rate was determined as 87%. According to the research of Moraisa and Azevadob (2011) the contribution of the creativity of students is 46%.

The female students created a total of 187 codes. The average coding rate per female student is 20,77. Male students had a total of 236 coding. The average coding rate per male student is 16,85. According to this data, female students have created more codes than male students. It can be said that the females' approach to the program is closer than the males'. Naderi and his friends (2009) found that the female's mean score was not higher than the males'. Gönen and his friends (1997) found no significant difference between creativity and gender in their researches.

In the analysis of teacher's interview form students had an improvement at the following skills: Different perspectives, problem solving, objective evaluation and imagination. According to the teacher male students were eager but female students were desirous on participating the CTJW program.

Conclusion

Within the framework of Creative Thinking and Journal Writing program, students were given creative writing activities in order to increase their creative thinking skills after giving creativity, creative thinking and creative writing training. At the end of the program, 23 students and their teacher were given an interview form to get their opinions about the program. According to the data obtained from the views of the students and the teacher about the program, it was seen that the aim was achieved. Students have gained a great deal of creative thinking skills from the activities besides the majority of the students loved to participate the program. The students stated that this program should be in all schools and in all classes by making suggestions about the program and all the teachers and parents should also take this program.

Journal writing program is a successful educational method in the United States of America. With this study which is carried out in Turkey with a fourth-grade student group, it is proven that students can get great creative acquisitions by having a journal writing 5-10 minutes a day. This program was made with only 23 journal writing topics. A full-year program will contribute to the further development of students' creative thinking skills. In addition, students can do this type of work with different thinking styles every year. For instance, it is thought that critical thinking and reflective thinking training and writing program may contribute to the students' development, too.

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