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The Impact of Contemporary Art on the Creativity of Twelve-Year-Olds

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Abstract

This paper presents the outcomes of a study aimed at verifying the impact of contemporary fine arts on the creativity of twelve-year-old pupils. In the study, a proven creativity test was used, which was applied in the initial and final measurement of the quasi experiment on a sample of 75 twelve-year-olds (N = 75). The results indicate the positive effect of quality contemporary fine art practices on the development of artistic creativity in twelve-year-olds, specifically, in as many as five of the six factors of artistic creativity. This is why art education teachers should be made more aware of the positive effects of contemporary art on the practice of teaching arts.

Key words: artistic creativity; contemporary art; creativity test; primary school.

Introduction

One task of the education system is to prepare learners to perceive the world and understand the environment we live in, while simultaneously teaching them how to participate in society (Kroflič, 2010; Uzunboylu et al., 2017). The area of fine arts offers opportunities to learn about life, to think about it, and to critically shape one's thoughts. Although the basic task of arts as a school subject is to understand the visual space and via artistic expression, its transformation into artistic space (Učni načrt Likovna vzgoja, 2011), artistic experience—as Frelih (2011) states—can hold the potential for conduct and decision-making in everyday life. In this regard, we think of contemporary fine art that deals with current topics and is directly involved in society and in our lives. For contemporary art to reach as many people as possible, it can no longer be confined to galleries; it consciously addresses the masses in public spaces, thus becoming—as Gompetz (2019) puts it—accessible to a wider public. While observing contemporary art, awareness of the wider concept is necessary, since this aspect helps us understand the world in which we live. Kemperl (2013) highlights the communication side between us and contemporary art, saying that works of art talk to us about the relation of the artist to himself or herself, to others, and about the relation to the world. The purpose of artworks is to be educational. They function reciprocally: they give us a great deal, but we also give much to them, in thinking about them, completing them with our thoughts, and critically evaluating them, while shaping and transforming our beliefs and values. With its concept, contemporary fine arts can also impact the creativity of the individual.

As Hozjan (2014) says, in diverse normative and strategic documents that define work in the education system, the development of creativity features as a general goal that needs to be implemented with as large a proportion of the population as possible. EU member states have agreed (The Official Journal of the EU, 2018) that for functioning in modern society, eight key competences for lifelong learning are crucial, among which creativity appears, included in the definition of the entrepreneurship competence. "Entrepreneurship skills are founded on creativity which includes imagination, strategic thinking and problem-solving, and critical and constructive reflection within evolving creative processes and innovation" (ibid, p. 11). The concept of creativity thus becomes a process relevant to modern society; the main goal of the education system should therefore be the promotion of creative competences among learners. Supported by selected methods of learning and teaching, by principles of work, and according to the ways of using individual methods, creativity is developed in the school space. With regard to methodological starting points, according to Trstenjak (1981), four viewpoints are taken into account for the discussion of creativity: the background, the personality, the process, and the product. Here it is about the flexibility of the teacher, who in planning the application of methods takes account of all the viewpoints of creativity. Through conversation, narration, play, visualisation, and presentation, the teacher should encourage curiosity and imagination, while not inhibiting the learner's unique ideas (Cencič, 2014). The goal of every teacher should be, through their creative approach, to design appropriate content and use recommended methods, to help pupils find the way toward creative solution of problems.

In line with the development of education science, psychology, didactics, and learning and teaching technology, today's didactics of arts also generates more upto-date, specific methods of work in the arts classroom. A Duh and Zupancic (2011) state, the method of aesthetic transfer is one such method:

It is about a set of didactic decisions, the goal of which is to create optimal conditions for the development of the aesthetic feeling and aesthetic functioning with the participants of the education process. In the method of aesthetic transfer, most of the art-didactic requirements and aspects of performing artistic activities are comprised. It includes the specific temporal and content articulation of activities, learning and teaching methods and forms of work, the ways of motivation and evaluation, the main emphasis being on the procedure of transmitting the aesthetic messages contained in the works of art to the receiver, i.e. to the participant in the education process. (p.49)

When speaking about creativity in the area of fine arts, artistic creativity thus means what gets developed via artistic activity. Artistic activity, in turn, depends on various factors such as perception, artistic experience, visual memory, motor skills, and imagination. Pečjak (1987) lists three basic phases of the creative process: "1) the acquisition of the material, the knowledge, getting acquainted with the situation; 2) discovering the idea, the solution, the *Aha!* experience, the transformation of the material; 3) verifying the solution or the idea" (ibid, p. 36). Also derived from these phases are the didactic aspects of planning educational content in the school subject of arts. When, however, the creative development of learners is monitored in research (Karlavaris & Kraguljac, 1981; Duh, 2004; Herzog, 2009), six agents are observed that either allow or promote creativity (see Table 1 below). The agents that allow artistic creativity are redefinition, fluency and elaboration. In these agents the factor of allowing prevails, while each of them also contains the weaker factor that promotes creativity. The agents that promote artistic creativity are originality, flexibility and sensitivity to artistic problems. Likewise, these agents also contain the weaker factor that allows artistic creativity (Duh, 2004).

Contemporary approaches to teaching fine arts require from the teacher considerable commitment, self-initiative and, last but not least, a great deal of activity following current topics in the field of contemporary fine arts. Duh and Zupančič (2009, p. 12) maintain that acquainting students with contemporary art is important mainly because, "contemporary artists breathe the same air as children. They both live in the same time. The problems that contemporary works of art contain-on an explicit or implicit basis, on a declarative or symbolic level—are problems that also affect our children and youth." Through a conversation about contemporary art, the teacher can develop in students the ability to articulate ideas, promote tolerance among peers, and through conversation about the context of the creation of the work of art and about the idea, allow students to recognize the problems of contemporary society (Kemperl, 2013). The importance of interpreting, researching, and expressing ideas within the treatment of contemporary fine art is highlighted by Charman and Ross (2006). The authors add that developing practical skills through a wide range of experimentation, with a range of different media and materials in contemporary fine art, is an important component in the decision to include contemporary fine arts into the primary school curriculum (ibid.). While learning about the artistic and formal characteristics and content of contemporary art, students respond in their own way to the topics discussed and develop the ability to express their own attitudes to certain content (Latimer, 2011; Flajšman, 2010). Thus, when planning a quality art-educational process, taking into account the method of the art-educational concept (Zupančič, 2006), we start from the narrative content of the particular contemporary work, as we no longer talk about the motif, but about the content. The selection of works of art that teachers deal with in art educational practice is therefore an important part of planning an art task. Concerning this, Duh and Zupančič (2009) propose two approaches: 1) we provide a

varied selection that includes as many different authors and their works as possible, thus securing a broad overview of a particular phenomenon, and 2) we present one author and her or his individual artwork in more detail. Regardless of which principle we choose, we must take into account the following criteria when selecting the artists: "the importance of the author and of his work; the typicality of the author and of his work; the clarity of the artworks; content suitability of the artworks" (Zupančič, 2006, p. 33). However, Atkinson says that "many artists who create today produce their works outside the acknowledged framework of art and its institutional frameworks so it is sometimes difficult to present their work as art, and this raises some relevant questions regarding the recognition of objects and their practices" (Atkinson, 2012, p. 7). Furthermore, students can express themselves through the art-creative process both through classical art practice and with the assistance of ICT resources. Contemporary fine arts, in contrast to classical approaches in fine arts, as Zupančič and Velikonja (2017, p. 291) say, "offer all the richness of expressive possibilities, both in mixing one visual field with another and finding new, different, unconventional ways of expression." Students can support or substantiate their art product verbally with an explanation, thus-through the expression of their own views—thinking intensely about the problem under discussion (Kozjek Varl & Duh, 2017). At the same time, students learn to form a critical attitude and develop the ability to think critically (Rupnik Vec, 2011; Kozjek Varl & Herzog, 2018).

Teachers should therefore include contemporary fine arts into modern-day arteducational practice because it is multi-layered and because it offers ample opportunity for creative work in the classroom. An appropriate approach to contemporary fine art offers varied understandings and points of view, while encouraging a critical view of the society. By presenting examples from the world of contemporary art, the teacher can bring students closer to global content, through which they learn about and understand the environment, the time, and the conditions in which we live. This encourages students to think creatively and critically, while solving art tasks allows them to express their views creatively. There should be more such direct encounters, experiences, and creative problem solving in the school space, since in addition to all the above, it also offers the student an incentive to develop creativity in general.

Methodology The Purpose and Objectives of the Research

In the study we were primarily interested in the impact of contemporary fine arts on the artistic creativity of twelve-year-olds. We wished to determine to what degree contemporary fine arts can infuence the development of creativity in twelve-yearolds. Because contemporary fine art is multi-layered and, as such, includes diverse approaches to artistic expression (performance, video, installation, etc.), art teachers can successfully incorporate it into art-educational practice, especially in the higher grades of primary school (Duh & Kozjek Varl, 2017; Kozjek Varl & Herzog, 2018). Besides, a somewhat negative attitude towards contemporary artistic practices still exists, so this aspect additionally encouraged us to carry out the present research, since with it we seek to examine and prove the positive effect of contemporary art on the promotion of artistic creativity.

Research Hypotheses

Before starting the research, the following research hypotheses were formulated: *General hypothesis:*

H1: With the students in the experimental group, greater progress will be recorded at the level of creative development compared to the students in the control group.

Specific hypotheses:

- Hsp1: With the students in the experimental group, greater progress will be recorded in experiencing artistic problems compared to the students in the control group.
- Hsp2: With the students in the experimental group, greater progress will be recorded in the identification of artistic problems compared to the students in the control group.
- Hsp3: With the students in the experimental group, greater progress will be recorded in the mental elaboration of ideas compared to the students in the control group.
- Hsp4: With the students in the experimental group, greater progress will be recorded in aesthetic organisation compared to the students in the control group.
- Hsp5: With the students in the experimental group, greater progress will be recorded in finding new artistic solutions compared to the students in the control group.
- Hsp6: With the students in the experimental group, greater progress will be recorded in flexible adaptation to the means of expression compared to the students in the control group.
- Hsp7: With the students in the experimental group, greater progress will be recorded in the fluency of artistic ideas compared to the students in the control group.
- Hsp8: With the students in the experimental group, greater progress will be recorded in motor skills compared to the students in the control group.
- Hsp9: With the students in the experimental group, greater progress will be recorded in artistic originality as individual sensitivity compared to the students in the control group.
- Hsp10: With the students in the experimental group, greater progress will be recorded in originality in the sense of observation compared to the students in the control group.
- Hsp11: With the students in the experimental group, greater progress will be recorded in observation that is beneficial for artistic transposition compared to the students in the control group.
- Hsp12: With the students in the experimental group, greater progress will be recorded in the process of successful transposition compared to the students in the control group.

Research Methods and Data Processing

A quantitative methodology using the causal experimental method in educational research was applied. To determine the differences, the t-test was applied. The outcomes are presented in tables stating the arithmetic mean (x), the standard deviation (s), the test of the equality of variances (Leven's test) and the test of the differences between the arithmetic means (t-test) (Sagadin, 2003).

Instruments

For the purpose of monitoring progress in the creativity of twelve-year-olds, we applied *The Test of Artistic Creativity* or *The Criteria of Development*. The test has proved its sensitivity, reliability and validity in a number of studies (Karlavaris & Kraguljac, 1974; Duh, 1997; Duh, 2001, Duh et al., 2014). By using this test, diverse factors of artistic creativity can thus be measured: *the level of intellectual optical thematic development* (the optical thematic (intellectual) aspect); *the level of creative development* (the creative aspect), and *the level of design development* (the design aspect). In our research, the level of creative development was monitored. Regarding the artistic creative level, the test task was set to allow for unusual solutions, where the representation of the six agents of creativity were evaluated: sensitivity to artistic problems, elaboration, flexibility, fluency, originality, and redefinition. In this, the individual agents were awarded points according to the system shown in Table 1.

| A G | ENTS OF A | RTISTIC CREATI | νιτγ | Points for evaluatior |
|----------------------------------------------------------------------|-------------------------------|---------------------------------------------------|----------|--------------------------|
| ARTISTIC ARTISTIC VILOM Creativity Creativity FLUENCY | ARTISTIC | Observation beneficial for artistic transposition | promotes | 1 – 4 |
| | REDEFINITION | The process of successful transposition | allows | 1 – 4 |
| | The fluency of artistic ideas | promotes | 1 – 4 | |
| U Pe | FLUENCY | Motor skills | allows | 1 – 4 |
| - | | Mental elaboration of ideas | promotes | 1 – 4 |
| | ELABORATION | Aesthetic organisation | allows | 1 – 4 |
| agents that ROMOTE eativity O | ARTISTIC | Artistic originality as individual sensibility | promotes | 1 – 5 |
| | ORIGINALITY | Originality in the sense of observation | allows | 1 – 4 |
| | | Finding new artistic solutions | promotes | 1 – 5 |
| | FLEXIBILITY | Flexible adaptation to the means of expression | allows | 1 – 4 |
| | SENSITIVITY TO | Experiencing art problems | promotes | 1 – 4 |
| | ARTISTIC PROBLEMS | Recognition of art problems | allows | 1 – 4 |

Table 1 Agents allowing and promoting artistic creativity and evaluation of the agents of artistic creativity

Research Sample

For this study, the pupils of two primary schools were included, who were on average 12 years old. At one of the schools, the experimental group was organised and at the other school, the control group. The aim of the research was to determine the differences in the progress of the pupils in each group at the level of creativity, where pupils in the experimental group were exposed to the influence of contemporary art.

| Table 2 | | | | | | | | |
|--------------------|----|------|--|--|--|--|--|--|
| Sample | | | | | | | | |
| | f | f % | | | | | | |
| Experimental group | 30 | 46.2 | | | | | | |
| Control Group | 35 | 53.8 | | | | | | |
| Total | 65 | 100 | | | | | | |

The Course of the Research

The initial phase: The tested pupils made a drawing under test conditions. They all had 45 minutes at their disposal. They drew with a black felt-tip pen on an A4 sheet of Schoellershammer paper. In both tests (the initial and the final test), the artistic task involved drawing a human figure in space in a way that allowed unusual, unique solutions through the use of diverse artistic elements. The motif: I am inventing an unusual musical instrument (Draw yourself inventing / producing a unique musical instrument and define the space where you are doing this).

The experiment: After the test as a record of the initial state, the experiment was carried out in the experimental group. Five art tasks were prepared that were designed to be consistent with the syllabus in force, but where contemporary fine arts content was included and familiarisation with diverse contemporary approaches to artistic work.

Task 1: introduction to contemporary fine arts, an item as artistic object: a shoe, a piece of pottery, installation.

Task 2: waste art, a transformation of an everyday object: a shoe, change of content.

Task 3: sculpting, eco-art, the concept of speed, designing with waste cardboard, installation.

Task 4: graphics, multicoloured linocut, dreams, conceptualism, installation.

Task 5: sculpting, ecology, designing with waste plastic bottles, plants.

Task 6: architecture, kinds of living – the slum, attitudes to poverty, existential problems, group work.

The final phase: In the final phase, the pupils sat the art test again under test conditions with the same purpose. The motif: a visiting Martian (draw yourself when a Martian pays a visit; define the place where the visit takes place).

Evaluation of the tests: Since the study was interested in the level / the progress of individual creative development, unique solutions in pupils' drawings were observed and measured with the assistance of the prepared evaluation scale for the assessment of children's art work (Karlavaris, 1974). The evaluation of the tests was carried out by a committee (two evaluators).

Results and Discussion

In the following, the results of the progress in both groups included in the educational experiment (experimental and control group) are presented separately for each agent (factor) that influences the level of creative development. We were interested in the creative aspect of the development of artistic creativity.

Table 3 gives the results for progress in **sensitivity to artistic problems**. Assessment / evaluation looked for separately experiencing artistic problems (the factor that promotes creativity) and the identification of artistic problems on the motif (the factor that allows creativity).

Table 3

Outcomes of the t-test of the difference of arithmetic means and of the F-test of the equality of variances (Leven's test) of the results in progress by experimental and control groups in the promoting factor of artistic creativity: SENSITIVITY TO ARTISTIC PROBLEMS

| SENSITIVITY TO ARTISTIC PROBLEMS | | group | \overline{x} | S | Leven's test of equality of variances | | t-test | |
|-------------------------------------|----|-------|----------------|---------|---------------------------------------------|-------|---------------|----------|
| | | | | | F | Р | t | Р |
| Experiencing artistic | 30 | EG | 3.5000 | 0.58722 | 11.988 | 0.001 | 4.142 | 0.000 |
| problems | 35 | CG | 2.6429 | 1.04721 | 11.988 | 0.001 | approximation | |
| Identification of artistic | 30 | EG | 7.0833 | 0.85181 | 19.459 | 0.000 | 4.988 | 0.000 |
| problems | 35 | CG | 5.3857 | 1.79085 | 19.439 | 0.000 | appro | ximation |

Table 3 shows that the condition for the computation of the t-test (experiencing artistic problems (P = 0.001) and identification of artistic problems (P = 0,000)) was not met; approximation was thus used in both cases. The results of the comparison between the groups show a statistically significant difference (P=0.000) in favour of pupils in the experimental group in their progress both in experiencing and in identifying artistic problems. It can thus be concluded that, with the pupils in the experimental group, greater spontaneous and conscious effort was perceived in managing the artistic problem; experiencing the artistic problem was, on average, partly consistent with the artistic experience of the artistic motif; the pupils had demonstrated satisfactory artistic expression.

At the level of creative development, we were interested in the promotion factor of the sensitivity to problems, which is divided into experiencing artistic problems and identification of artistic problems. We found that in both agents, there were differences in the progress in sensitivity to artistic problems. Based on these findings, specific hypotheses Hsp1 and Hsp2 can be confirmed.

Table 4 presents the results for progress in elaboration. This agent consists of mental elaboration of the idea, which means the preparation of the creative process (the factor of promotion) and the aesthetic organisation of the expression, which means the consistency of the idea, material and artistic planning, while taking into account the design rules (the factor of allowing creativity).

Table 4

Outcomes of the t-test of the difference of arithmetic means and of the F-test of the equality of variances (Leven's test) of results in progress by experimental and control groups in the factor that allows artistic creativity: ELABORATION

| ELABORATION | n | GROUP | \overline{x} | S | of the ec | i's test quality of inces | t-test | | |
|----------------------------|----|-------|----------------|---------|-----------|---------------------------------|---------------|----------|--|
| | | | | | F | Р | t | Р | |
| Mental | 30 | EG | 6.1833 | 0.98684 | | | 3.250 | 0.002 | |
| elaboration of the idea | 35 | CG | 4.9000 | 2.07860 | 26.134 | 0.000 | approximatior | | |
| Aesthetic | 30 | EG | 6.5167 | 1.17798 | 6.020 | 0.017 | 4.261 | 0.000 | |
| organisation | 35 | CG | 4.9714 | 1.72756 | 0.020 | 0.017 | approx | kimation | |

Table 4 shows that the condition for the computation of the t-test was met neither with mental elaboration (P=0.000) nor with aesthetic organisation (P=0.017); approximation was thus used with both agents. The results of comparison between the groups indicate a statistically significant difference regarding both mental elaboration of the idea (P=0.002) and aesthetic organisation (P=0.000). The results allow us to conclude that differences existed between the groups in favour of the experimental group. The pupils in the experimental group were more successful in the procedures for realisation; they demonstrated good artistic ideas. They were relatively better and more spontaneous at achieving consistency with artistic rules and the use of material (the felt-tip pen). We could perceive the beginning of a more conscious approach to structuring artistic expression.

At the level of creative development, we were also interested in the agent that allows creativity – elaboration (mental elaboration of the idea and aesthetic organisation of the expression). With these results, we can confirm specific hypotheses Hsp3 and Hsp4.

Table 5 presents the results regarding pupils' progress in the agent flexibility, composed of discovering new ways in finding artistic solutions (divergent thinking) – the factor of promotion – and flexible adaptation to the means of expression (the factor of allowing creativity).

The condition for the computation of the t-test (Table 5) was met both with "Finding new artistic solutions" (P=0.114) and with "Flexible adaptation to the means of expression" (P=0.562). Here too, the results of comparison between the groups indicate a statistically significant difference (P=0.000) with both agents of flexibility

(finding new artistic solutions and flexible adaptation to the means of expression) in favour of the experimental group. In the work by pupils in the experimental group, we detected a few original elements in unique solutions to the artistic problem, the result being acceptable, considering the age of the pupils, which is manifested in the consistency of the idea, the material and the whole expression. In the work by pupils of the control group, partial adaptation to the artistic means can be detected, some elements of flexibility being present, yet not influencing the whole impression of the artistic expression.

Table 5

Outcomes of the t-test of the difference of the arithmetic means and the F-test of the equality of variances (Leven's test) of results in progress by experimental and control groups in the factor of promotion of artistic creativity: FLEXIBILITY

| FLEXIBILITY | n | Group | \overline{x} | S | of the ec | 's test juality of inces | t-to | est |
|------------------------|----|-------|----------------|---------|-----------|--------------------------------|-------|-------|
| | | | | | F | Р | t | Р |
| Finding new | 30 | EG | 6.5333 | 1.40770 | 2.572 | 0.114 | 4.739 | 0.000 |
| artistic solutions | 45 | CG | 4.6000 | 1.81416 | 2.372 | 0.114 | 4./39 | |
| Flexible adaptation | 30 | EG | 5.8667 | 1.33864 | 0.220 | 0.540 | 4 057 | 0.000 |
| to means of expression | 35 | CG | 4.0286 | 1.60854 | 0.339 | 0.562 | 4.957 | 0.000 |

Regarding flexibility, the agent that promotes creativity at the level of creative development, we concluded that in progress with finding new artistic solutions and flexible adaptation to new means of expression, there were also statistically significant differences in favour of progress among the experimental group. With this finding, we can thus also confirm specific hypotheses Hsp5 and Hsp6.

Table 6

Outcomes of the t-test of the difference of the arithmetic means and the F-test of the equality of variances (Leven's test) of results in progress by experimental and control groups in the factor of allowing artistic creativity: FLUENCY

| ARTISTIC FLUENCY | n | GROUP | \overline{x} | S | Leven of the e o varia | quality f | t-test | |
|---------------------|----|-------|----------------|---------|---------------------------------|--------------|--------|-------|
| | | | | | F | Р | t | Р |
| Fluency of artistic | 30 | EG | 5.2000 | 1.73006 | 0.356 | 0.553 | 3.248 | 0.002 |
| ideas | 45 | CG | 3.7143 | 1.92616 | 0.550 | 0.555 | 5.240 | |
| Motor skills | 30 | EG | 6.1833 | 1.42323 | 2 6 2 7 | 0.050 | | |
| | 35 | CG | 4.0000 | 1.94407 | 3.697 | 0.059 | 5.090 | 0.000 |

Table 6 shows the results of the pupils' progress in artistic fluency. The factors under observation are fluency of artistic ideas (promoting factor) and motor skills in the realisation of the idea (allowing factor).

We can see from Table 6 that the condition for the computation of the t-test was met for both agents: the fluency of artistic ideas (P=0.553) and motor skills (P=0.059). The results of the comparison between the two groups point to a statistically significant difference regarding fluency of artistic ideas (P=0,002) and a statistically significant difference regarding motor skills (P=0.000) in favour of the pupils in the experimental group. In the work by the latter group, this is manifested as an interesting and partly new artistic idea as an impulse for artistic solution, while in the work of pupils in the control group, partial transition to interesting artistic ideas prevails. In the work by pupils in the experimental group, successful mastery of drawing technique was also noted, with richer procedures and variations, more diverse and richer use of line and playing with the technical possibilities offered by the drawing utensil.

Based on these findings, we confirm specific hypotheses Hsp7 and Hsp8: also, at the level of the factor fluency that allows artistic creativity, we found that there were differences in the progress of the experimental group at both agents.

Table 7 gives the results of the pupils' progress in artistic originality, specifically of artistic originality as individual sensitivity (promoting factor) and originality in the sense of observation (allowing factor).

Table 7

Outcomes of the t-test of the difference of the arithmetic means and the F-test of the equality of variances (Leven's test) of results in progress by experimental and control groups in the factor of promoting artistic creativity: ARTISTIC ORIGINALITY

| ARTISTIC ORIGINALITY | | Group | \overline{x} | S | of the ec | i's test quality of inces | t-te | est |
|------------------------------------------------|----|-------|----------------|---------|-----------|---------------------------------|---------|--------|
| | | | | | F | Р | t | Р |
| Artistic originality as individual sensitivity | 30 | EG | 6.6000 | 1.83077 | 0.005 | 0.426 | 2.064 | 0.000 |
| | 35 | CG | 4.6143 | 2.24619 | 2.285 | 0.136 | 3.864 | |
| Originality in the sense | 30 | EG | 6.2667 | 1.28475 | 9.154 | 0.004 | 5.011 | 0.000 |
| of observation | 35 | CG | 4.2143 | 1.98630 | 9.134 | 0.004 | approxi | mation |

We see in Table 7 that the condition for the computation of the t-test for the factor of artistic originality was met (P=0.136), while for the factor of originality in the sense of observation, it was not met (P=0.004). In this position, approximation was therefore used. In both cases, however, the results of the comparison between the two groups indicate statistically significant differences (P=0.000). Differences emerged in favour of the pupils in the experimental group, since in their work they manifested partial originality and individuality, while in the work by pupils from the control group, common, familiar solutions prevailed. Likewise, some partly original details could be noticed, while in the progress of pupils in the experimental group, parts of artistic expression were noted that could be deemed original; moreover, individual artistic elements contain enough points of interest and form interesting mutual relations.

We were also interested in artistic originality, which represents a promoting factor of artistic creativity dealt with in the sense of individual sensitivity and simultaneously in the sense of observation. Progress was noticed in both participating groups, yet more so in the experimental group. Based on this, specific hypotheses Hsp9 and Hsp10 can be confirmed.

Table 8 presents the results for the progress in artistic redefinition. With respect to this, results were obtained regarding the promoting factor of sensitive observation of the artistic concept favourable for artistic transposition and the process of artistic transposition (factor allowing creativity).

Table 8

Outcomes of the t-test of the difference of the arithmetic means and the F-test of the equality of variances (Leven's test) of results in progress by experimental and control groups in the factor of promoting artistic creativity: ARTISTIC REDEFINITION

| ARTISTIC REDEFINITION | n | Group | \overline{x} | S | Leven's test of the equality of variances | | t-test | |
|----------------------------|----|-------|----------------|---------|-------------------------------------------------|-------|--------|-------|
| | | | л | | F | Р | t | Р |
| Observation favourable | 30 | EG | 2.5500 | 0.93172 | 0.125 | 0.725 | 0.498 | 0.620 |
| for artistic transposition | 35 | CG | 2.4429 | 0.80231 | 0.125 | 0.725 | 0.490 | |
| The process of successful | 30 | EG | 2.6500 | 1.06795 | 0.894 | 0.348 | 0.678 | 0.500 |
| artistic transposition | 35 | CG | 2.4857 | 0.88688 | 0.894 | 0.540 | 0.078 | |

The condition for the computation of the t-test (Table 8) was met for both factors: observation favourable for artistic transposition (P=0,725) and the process of successful artistic transposition (P=0.348). The results of the comparison between the two groups do not point to statistically significant differences (P=0.620) regarding observation favourable for artistic transposition. Both groups were equal in perception; this was, however, not enough for transposition into an artistic structure; the pupils partly identified the favourable components and partly transposed them into an artistic structure. No statistically significant differences showed between the two groups. The results of the comparison between the two groups, however, point to a statistically significant difference (P=0.500) regarding the process of successful artistic transposition. We found the differences between the groups emerged in favour of the experimental group, although these were not very large. In both groups, partial spontaneity of artistic expression was noted on lower associative relations; redefinition was modest in character.

At the level of creative development, we were also interested in artistic redefinition, the factor that allows artistic creativity. We found that difference in progress between the two groups was partly nonexistent (sensitive observation of artistic phenomena) and partly minimal (the process of successful artistic transposition). Based on these findings, we can reject specific hypothesis Hsp11, while specific hypothesis Hsp12 can be partly confirmed.

Conclusion

With the present paper we sought to highlight the importance of including contemporary artistic practices into the primary school curriculum, not merely because of the content characteristics and didactic value, but because—as we have proven with the present study—it exerts a positive effect on artistic creativity. With the research, in which a quasi-educational experiment was employed, we have proven that pupils in the experimental group made better progress in sensitivity to artistic problems in both factors. Based on this, we confirmed hypotheses Hsp1 and Hsp2. The same was proven with the agent of elaboration (mental elaboration of the idea and the aesthetic organisation of expression). We thus confirmed specific hypotheses Hsp3 and Hsp4. Concerning flexibility, the factor which at the level of creative development promotes creativity, we found that in progress with finding new artistic solutions and flexible adaptation to new means of expression, there were also statistically significant differences in the progress of the experimental group of pupils. Thus, in this finding we confirmed specific hypotheses Hsp5 and Hsp6. Based on the above findings, we confirm specific hypotheses Hsp7 and Hsp8: at the level of the factor fluency, which allows artistic creativity, we also found differences in the progress of the experimental group for both factors. With both participating groups, progress was noted in the agent of originality; however, this was greater in the experimental group. Based on this, we confirmed specific hypotheses Hsp9 and Hsp10. With the agent of artistic redefinition, the factor that allows artistic creativity, we found that differences between the two groups are partly absent (sensitive observation of artistic phenomena) and partly minimal (the process of successful artistic transposition). Based on these outcomes, we rejected specific hypothesis Hsp11, while specific hypothesis Hsp12 was partly confirmed.

Given these results, we can conclude that in five out of six agents, a positive effect of the introduction of contemporary artistic practices can be measured among pupils in the experimental group. Such results should encourage teachers who teach arts to introduce contemporary artistic practices into the art-educational curriculum. The study has heartened us to explore the positive influences of contemporary artistic practices more broadly, not only in the field of their positive influence on artistic ability.

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Utjecaj suvremene umjetnosti na kreativnost dvanaestogodišnjaka

Sažetak

U ovom radu predstavljeni su ishodi istraživanja kojim se nastojalo potvrditi utjecaj suvremene likovne umjetnosti na kreativnost dvanaestogodišnjih učenika. U ovome je istraživanju korišten verificirani test kreativnosti u inicijalnom i završnom mjerenju kvazieksperimenta koji je proveden na uzorku od 75 dvanaestogodišnjaka. Rezultati pokazuju pozitivni učinak kvalitetnih praksi suvremene likovne umjetnosti na razvoj umjetničke kreativnosti posebno dvanaestogodišnjaka, u čak pet od šest čimbenika umjetničke kreativnosti. Zbog ove činjenice trebalo bi više razvijati svijest učitelja umjetnosti o pozitivnim učincima suvremene umjetnosti na praksu poučavanja umjetnosti.

Ključne riječi: osnovna škola; suvremena umjetnost; test kreativnosti; umjetnička kreativnost.