

# Development of Creative Abilities of Preschool Children Using Musical Digital Technologies

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## ABSTRACT

The development of children's creative abilities is one of the urgent tasks of modern education. The most favorable environment for the development of creative abilities can be considered the sphere of musical and artistic education. In recent decades, this area has undergone significant changes, primarily due to the active introduction of digitalization in the educational process. Despite the numerous works devoted to the use of information and communication technologies in the educational process, there are practically no publications devoted to the development of musical and creative abilities with the introduction of modern music and digital technologies when working with preschool children. The paper substantiates the need for the use of information and communication technologies in the musical education of preschool children, the classification of multimedia teaching aids for preschoolers is proposed, the results of testing the use of music and digital technologies in the development of creative abilities of older preschool children in various types of musical activity are presented.

**Keywords:** *creativity, preschoolers, digital music technology, digitalization*

## 1. INTRODUCTION

Modern musical and pedagogical practice, responding to the urgent needs of society and adapting to the real needs of people, is increasingly turning to forms of creative musical education, which is of particular value and interest today.

Questions of development of creative abilities, including children's creative abilities were repeatedly touched upon in the works of domestic and foreign researchers, such as M. Wertheimer, J. Guildford, A. Maslow, E.P. Torrens, B. Yavorsky, B.V. Asafiev, B.M. Teplov E. Balchitis, L. A. Barenboim, M. Kozyrev, A. Pilichiauskas, G. Rigina, G. I. Shatkovsky, B. Shelomov, M. Kotlyarevskaya, D. B. Epiphany, H.A. Vetlugin, J.I.C., V.A. Derkunskaia, L.S. Vygotsky, H.H. Poddyakov, Y.A. Ponomarev, C.L. Rubinstein and many others.

Of particular relevance at present is the study of the influence of modern information and communication technologies on the development of musical and creative abilities, justification of the possibility of using and studying the effectiveness of modern music-digital technologies when working with preschool children [7].

Despite the numerous works devoted to the use of music-computer technologies in pedagogical practice, no studies today have been identified aimed at studying the initial creative training in music of preschool children using music-digital technologies in which sufficient attention would be paid to productive forms of musical activity.

## 2. STATEMENT OF THE PROBLEM

The creative process has a complex psychophysiological organization, where the laws of higher nervous activity play a leading role [10, 138]. Ovsyankina G.P. identifies four stages of the creative process, the first of which is associated with the accumulation, the second with the maturation of the plan, the third involves work on the composition, in the fourth there is a materialization of the plan [10, 139].

The most favorable area for the development of creative abilities Krasilnikov considers art, and, in particular, musical education [8, 7]. Musical and creative abilities of a child suggest the presence of musical and creative activity in which something new and original in the field of musical art is generated. Musical and creative abilities are based on creative inclinations that are formed and developed in activities. A.L. Gotsdiner notes that "... a child has only natural prerequisites for musical activity, which he must develop" [6, 74]. In addition, for the development of musical and creative abilities of children, the existing experience in communicating with musical art and, in part, formed abilities are important. Vetlugina N.A. determined the conditions for the emergence of children's creativity, including the accumulation of

experience in the perception of music and the accumulation of experience in performing activities [3].

One of the main characteristics of children's creativity is its syncretism, in which "certain types of art are not yet divided and specialized" [4, 54]. It should also be noted that the creative activity of a preschooler is characterized, to a greater extent, by improvisation than awareness. In addition, the value of creative manifestations of preschool children is not in creating a material or spiritual product, but in the process itself, which must be carefully planned and organized. Gogoberidze A.G. and Derkunsakaya V.A. they talk about the relativity or subjectivity of children's creativity in which the novelty of the results lies in the discovery by the child of something new for himself and in the disclosure of his own inner world [5, 575]. G.A. Praslova notes that "musical creativity is manifested in the ability to reproduce, interpret and experience music" [11, 148].

The musical creativity of preschool children is most closely associated with the game, as the main activity of preschool children. Verkhoturova Yu.A., Galaguzova Yu.N., Sergeeva N.N. when choosing and organizing games, they note the need to take into account the situation, the needs and interests of the child, the attractiveness of games for the preschooler, suggest giving preference to games that develop children's initiative and are able to hold attention concentration for a long time [2, 150-154].

Musical and creative abilities of preschoolers develop with the active interaction of children and adults. Similar interaction Yu.A. Verkhoturova, Yu.N. Galaguzova. E.V. The Dongauser consider as "a system of components that are sequentially interconnected - mutual cognition, mutual understanding, relationships, mutual actions and mutual influence" [1, 164-171].

In the development of the musical and creative abilities of preschool children, the role of the pedagogical potential of musical and computer technologies in scientific and methodological literature is practically not affected. Moreover, the need and need for their use in the modern educational process is difficult to overestimate.

In connection with the foregoing, the following tasks are formulated:

- 1) to develop pedagogical technology for the development of creative abilities of children of preschool age using music-computer technologies in various types of musical activity;
- 2) to carry out experimental work on the development of creative abilities of children of preschool age using music-computer technologies;
- 3) to analyze the results of work on the development of creative abilities of children of preschool age using musical computer technologies in various types of musical activity.

### **3. RESEARCH QUESTIONS**

When considering the use of music and computer technology in the development of the creative abilities of older preschool children in various types of musical activity, it is necessary to determine the effectiveness of their use. To do this, find the answer to the question what are the criteria for the development of creative abilities of children of preschool age? Also relevant is the question under what conditions is it possible to develop the creative abilities of older preschool children using music-computer technology?

### **4. PURPOSE OF THE STUDY**

Theoretically substantiate and experimentally test the feasibility and effectiveness of using digital music in the development of the creative abilities of older preschool children in musical activity.

### **5. RESEARCH METHODS**

- 1) theoretical - the study and analysis of psychological, pedagogical, reference, encyclopedic, scientific, methodological and specialized literature on the research problem; generalization of experience in organizing the musical and creative activities of preschoolers;
- 2) empirical - the development of the content of the work on the development of creative abilities of preschool children using music and computer technologies in various types of musical activity; observation of the creative development of preschoolers.
- 3) quantitative - statistical methods aimed at the initial collection of experimental data, the determination of indicators and criteria and their measurement during the experiment.

### **6. RESEARCH RESULTS**

Classes with preschoolers using music using computer-based computer technologies can increase the degree of visibility, make the material more accessible to perception, increase the pace of studying the material, satisfy cognitive activity, increase motivation, which in general allows you to optimize the learning process and education of preschool children.

Conventionally, multimedia tools used when working with preschoolers can be divided into:

- electronic anthologies of printed texts (electronic books, text materials, textbooks, programs, guidelines, class notes, analytical notes, collections of literary texts, poems, sayings of famous people, essays on the theory and history of art, lists of literature on various topics, dictionaries of concepts, facts, names, events, tasks for independent work, etc.);
- electronic textbooks, which are multimedia publications with interactivity and hypertext technologies;

- e-learning programs that ensure the achievement of given didactic goals, capable of managing the actions of students, educate, monitor, consult, train, issue certificates and have a fairly complex structure;
- training videos specifically designed for didactic purposes;
- multimedia anthologies:
  - sound anthologies (including musical works classified by foreign and domestic composers, musical genres, forms, styles, musical artists, types of musical activity, etc.);
  - musical anthologies (including works of instrumental and vocal music created in special musical editors);
  - anthology of fine materials (portraits of composers, performers, reproductions of paintings, images of musical instruments, etc.);
  - video anthologies (musical films, animated films, concerts, master classes, etc.);
- musical encyclopedias, with which you can virtually wander through the halls of museums, get acquainted with the musical culture of different countries, musical works of different eras;
- computer presentations, which are sequentially presented slides containing text, graphic images, sound files, videos, which summarize the essence of the material being studied;
- tasks (rebuses, puzzles, quizzes, crosswords, etc.);
- software measuring instruments that allow you to control and adjust existing knowledge, skills (electronic test systems, music dictations, music quizzes, questionnaires, voting systems, etc.);
- electronic simulators designed to consolidate the material and develop practical skills [9, 118-119].

Classes with preschoolers on the development of creative abilities using digital music technology were held at the Municipal Autonomous Preschool Educational Institution - Child Development Center - Kindergarten No. 199 "Creation" (Ekaterinburg) with older preschool children in the 2017-2019 school year in group music lessons and in individual creative activities. Traditional classes included specially designed creative assignments using music and computer technologies, formed for various types of musical activity. Creative tasks contribute to the general creative development of the child, the development of his creative and musical abilities, artistic imagination, figuratively associative thinking.

Children of preschool age were divided into 2 groups:

- 1) "control", where the training took place in the traditional form, not involving the use of tasks specially designed for the development of creative abilities of preschool children (24 people);
- 2) "experimental", where the training was held using music and computer technologies used for the creative development of children (24 people).

The experimental part consisted of three stages.

1. A statement, the purpose of which was to determine the initial level of development of creative abilities in children of preschool age. In accordance with the purpose of the experiment, a number of tasks were set:

- determining the parameters of pedagogical monitoring □

- development of the task system in accordance with the parameters of pedagogical monitoring;
- carrying out a monitoring procedure to identify the level of development of creative abilities of children of preschool age.

2. Formative, the purpose of this stage is to create pedagogical conditions.

During this stage, the following tasks were solved:

- development of the most effective and efficient methods of work using music and computer technologies aimed at developing the creative abilities of children of preschool age;
- implementation and solution of tasks;
- conducting pedagogical research.

3. The analytical-concretizing stage of the experiment.

In the course of this, the following tasks were solved:

- analysis of the results of pedagogical monitoring;
- evaluation of the effectiveness of experimental work, conclusions.

To study the creativity of older preschool children, the methods used were "Diagnosis of the musical abilities of a preschooler" S.I. Merzlyakova and "Assessment of the levels of development of musical performance and musical creativity" L. Khodonovich.

The study and assessment of the development of creative abilities of children of preschool age took place in the following types of musical activity:

- songwriting;
- dance creativity;
- music and game creativity;
- improvisational music playing.

The development of children's creative abilities was evaluated by the following indicators:

- independence;
- activity;
- originality;
- emotionality;
- motivation;
- development of imagination.

To study the level of development of creative abilities of children of senior preschool age, the following criteria were used:

High level - creative activity, independence, initiative, quick understanding of the assignment, precise, non-standard, expressive implementation without the help of an adult; pronounced emotionality, motivation, originality, fantasy.

The average level is emotional responsiveness, interest in creative activity, a desire to get involved in it with some difficulty in completing tasks, the child needs the help of a teacher, additional explanation, display, repeated repetitions, shows a certain degree of originality.

Low level - the child is unemotional; smoothly, calmly refers to creative and musical activity, does not show an active interest, is passive, is not capable of independence, often copies the actions of adults or children, there is no originality of performance.

The critical level is the child's indifferent or negative attitude to music, musical and creative activity, lack of

desire to complete tasks, refusal to interact with peers and teachers.

When fixing the results of a study of the level of development of musical and creative abilities of children, the following abbreviations were used:

B - a high level of musical development;

H - low;

C - average;

0 - critical.

During the school year, three measurements of the level of development of musical and creative abilities in each group were carried out (September, January, May).

Уровень развития музыкально-творческих способностей детей подготовительной группы (контрольная гр.)

№, Фамилия, имя ребенка	Детское музыкальное творчество											
	Песенное			Танцевальное			Музыкально-игровое			Импровизационное музицирование		
	1	2	3	1	2	3	1	2	3	1	2	3
1 Реб.1	с	с	в	с	с	в	с	с	в	н	с	с
2 Реб.2	н	н	с	н	с	с	н	с	с	н	н	с
3 Реб.3	с	с	в	с	в	с	с	с	в	н	с	с
4 Реб.4	н	с	с	н	с	с	с	с	н	н	с	с
5 Реб.5	н	с	с	н	с	с	с	с	в	н	с	с
6 Реб.6	с	с	с	с	с	с	с	с	с	в	н	с
7 Реб.7	в	в	с	с	в	с	с	с	в	с	с	с
8 Реб.8	с	с	с	с	с	с	с	с	с	с	с	с
9 Реб.9	с	с	с	с	с	с	с	с	с	с	с	с
10 Реб.10	с	с	с	с	с	с	с	с	с	с	с	с
11 Реб.11	с	с	с	с	с	с	с	с	с	с	с	с
12 Реб.12	н	с	с	н	с	с	н	с	с	н	н	с
13 Реб.13	н	с	с	н	с	с	н	с	с	н	н	с
14 Реб.14	с	с	с	с	с	с	с	с	с	с	с	с
15 Реб.15	с	с	с	с	с	с	с	с	с	с	с	с
16 Реб.16	с	с	с	с	с	с	с	с	с	с	с	с
17 Реб.17	с	с	с	с	с	с	с	с	с	с	с	с
18 Реб.18	с	с	с	с	с	с	с	с	с	с	с	с
19 Реб.19	н	с	с	н	с	с	н	с	с	н	н	с
20 Реб.20	с	с	с	с	с	с	с	с	с	с	с	с
21 Реб.21	с	с	с	с	с	с	с	с	с	с	с	с
22 Реб.22	с	с	с	с	с	с	с	с	с	с	с	с
23 Реб.23	н	н	с	н	с	с	н	с	с	н	н	с
24 Реб.24	с	с	с	с	с	с	с	с	с	с	с	с
Высокий	1	2	13	0	4	12	3	8	17	0	0	5
Средний	16	19	11	17	18	12	16	13	7	12	16	17
Низкий	7	3	0	7	2	0	5	3	0	12	8	2
Критический	0	0	0	0	0	0	0	0	0	0	0	0
Высокий	4%	8%	54%	0	17%	50%	13%	33%	65%	0	0	20%
Средний	67%	19%	46%	71%	74%	30%	61%	34%	33%	30%	67%	71%
Низкий	29%	13%	0	29%	9%	0	20%	13%	0	50%	33%	9%
Критический	0	0	0	0	0	0	0	0	0	0	0	0

**Figure 1** The level of development of musical and creative abilities of children in the preparatory group (control group)

According to the measurement results, it is obvious that children of preschool age have a different level of development of musical and creative abilities from low to high. A critical level of development in these groups practically does not occur. In various types of musical and creative activity, the development of musical and creative abilities of preschoolers proceeds unevenly. The most vivid musical and creative abilities are manifested in the musical play activity, and the least obvious in improvisational music-making.

Уровень развития музыкально-творческих способностей детей подготовительной группы 2 (экспериментальная гр.)

№ п/п	Фамилия, имя ребенка	Детское музыкальное творчество											
		Песенное			Танцевальное			Музыкально-игровое			Импровизационное музицирование		
		1	2	3	1	2	3	1	2	3	1	2	3
1 Реб.1	в	в	в	с	в	в	в	с	с	с	с	с	
2 Реб.2	с	с	с	с	с	с	с	с	с	с	с	с	
3 Реб.3	с	с	с	с	с	с	с	с	с	с	с	с	
4 Реб.4	с	с	с	с	с	с	с	с	с	с	с	с	
5 Реб.5	с	с	с	с	с	с	с	с	с	с	с	с	
6 Реб.6	с	с	с	с	с	с	с	с	с	с	с	с	
7 Реб.7	с	с	с	с	с	с	с	с	с	с	с	с	
8 Реб.8	с	с	с	с	с	с	с	с	с	с	с	с	
9 Реб.9	с	с	с	с	с	с	с	с	с	с	с	с	
10 Реб.10	с	с	с	с	с	с	с	с	с	с	с	с	
11 Реб.11	с	с	с	с	с	с	с	с	с	с	с	с	
12 Реб.12	с	с	с	с	с	с	с	с	с	с	с	с	
13 Реб.13	н	с	с	н	с	с	с	с	с	с	н	н	
14 Реб.14	н	с	с	н	с	с	с	с	с	с	н	н	
15 Реб.15	с	с	с	с	с	с	с	с	с	с	н	н	
16 Реб.16	в	в	с	с	с	с	с	с	с	с	с	с	
17 Реб.17	с	с	с	с	с	с	с	с	с	с	с	с	
18 Реб.18	с	с	с	с	с	с	с	с	с	с	с	с	
19 Реб.19	с	с	с	с	с	с	с	с	с	с	с	с	
20 Реб.20	н	н	с	н	с	с	н	с	с	н	н	н	
21 Реб.21	с	с	с	с	с	с	с	с	с	с	с	с	
22 Реб.22	с	с	с	с	с	с	с	с	с	с	с	с	
23 Реб.23	н	с	с	н	с	с	с	с	с	с	н	н	
24 Реб.24	н	с	с	н	с	с	с	с	с	с	н	н	
Высокий	2	3	15	0	5	13	3	9	19	0	0	8	
Средний	17	20	9	19	19	11	18	12	5	14	18	15	
Низкий	5	1	0	5	0	0	3	3	0	10	6	1	
Критический	0	0	0	0	0	0	0	0	0	0	0	0	
Высокий	8%	13%	65%	0	21%	54%	13%	37%	79%	0	0	33%	
Средний	71%	33%	37%	79%	79%	46%	74%	30%	21%	58%	74%	63%	
Низкий	21%	4%	0	21%	0	0	13%	13%	0	42%	26%	4%	
Критический	0	0	0	0	0	0	0	0	0	0	0	0	

**Figure 2** The level of development of musical and creative abilities of children of preparatory group 2 (experimental group)

Уровень развития музыкально-творческих способностей детей старшего дошкольного возраста

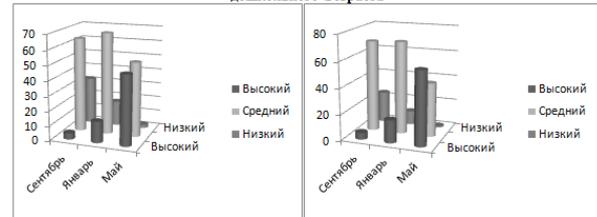


Рисунок 1 - Контрольная группа

Рисунок 2 - Экспериментальная группа

**Figure 3** The level of development of musical and creative abilities of children of preschool age

With systematic classes in musical and creative activity, the level of musical and creative development of children of preschool age is significantly increased. The most significant increase we observe in the group of children, the training in which was carried out using music and computer technologies.

Уровень развития музыкально-творческих способностей детей старшего дошкольного возраста (итоговое измерение)



**Figure 4** The level of development of musical and creative abilities of children of preschool age (final measurement)

## 7. CONCLUSION

Thus, we can conclude that:

- the use of music and digital technologies is very important in the musical education of preschoolers;
- music and digital technologies can be used to develop the creative abilities of older preschool children;
- the use of music and computer technology is quite effective in developing the creative abilities of preschoolers;
- music-digital technologies can be applied both in group classes and in individual ones;
- it is advisable to use musical digital technologies for the development of creative abilities of preschool children in various types of musical and creative activities;
- for the development of musical and creative abilities using digital music technology, specially created

conditions and purposefully developed and systematically applied technologies are necessary;

- analysis of the results of pedagogical monitoring of the level of development of musical and creative abilities of children of preschool age has confirmed the effectiveness of the used musical-digital technologies and the developed lesson system;
- developed scientific and methodological materials can be successfully used in preschool organizations when working with children of older preschool age, including using digital music, as well as in the system of additional musical and artistic education.

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