

### Improvement of Artistic and Performing Skills of 5-7<sup>th</sup> Grade Students of the General Secondary School Through the Technology of Developing Competencies for Working with Computer Programs

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**Abstract:** This article is written based on the results of the dissertation "Technology of development of competencies of working with computer programs in improving the artistic and performance skills of students in music lessons" (in the case of grades 5-7), in which the use of computer programs in music lessons of general secondary school students methods of improving artistic and performance skills are explained.

**Key words:** Information technology, computer programs, performance skills, musical knowledge, computer literacy, subject, innovative technology.

#### Introduction

**Relevance of the study.** The rapid quantitative and qualitative growth of the information technology space has affected all areas of human activity and fundamentally changed the idea of providing resources to the general secondary school, which is reflected in the support and introduction of innovative technologies into the educational process. These changes affected all subjects of the general secondary school and required the development of a new model of education using computer programs, which in turn may affect the process of formation of students' knowledge activity.

The concept of modernization of education emphasizes that at the current stage of development determined by the tasks of building a democratic and legal state, Uzbekistan should not lag behind other countries and global trends in economic and social development.

Accordingly, the research includes important regulatory documents in the field of education aimed at ensuring personal development in the innovative conditions of education and training.

The relevance of this work is determined by the formation of the information society, which is directly related to the penetration of computer programs into all areas of human activity, including the general music education system, at the end of the 20<sup>th</sup>-21<sup>st</sup> centuries. However, it should be noted that at present, in many general secondary schools, the educational activity of schoolchildren in music lessons has decreased not only due to insufficient qualifications of music teachers, but also due to the need to use new approaches in the forms and methods of music education. The above reasons became the basis for the search for effective measures related to providing the system of general music education with the methodology of optimal use of computer programs and the practice of working with them.

These include, for example, the development of educational programs, methodological recommendations and techniques for the use of computer programs in music lessons, improvement of material and technical equipment of the educational process, and changes in the level of readiness of music teachers to use computer programs in school music lessons. All the above measures are open and relevant today.

In the dissertation work, he collected a certain knowledge fund necessary for the formation and solution of the problem being studied in the field of science. Leading ideas of philosophy, pedagogy and psychology, innovative pedagogical theories and teaching technologies, researches on increasing the

cognitive activity of schoolchildren on the issues of public information and computerization of education aroused scientific interest in our work.

### Research in the following areas is important to us:

- Philosophical ideas about computerization, informatization of society and interaction between man and computer (R.F. Abdeev, G.L. Buzuk, V.A. Geroimenko, B.S. Gershunsky, A.I. Rakitov, V.P. Rachkov and others);
- personality development in music psychology (L.L. Bochkarev, V.I. Petrushin, B.M. Teplov, G.M. Tsypina, etc.);
- psychological aspects of using computer programs in music education (V.V. Mazepus, V.M. Chehansky);
- general pedagogy, innovative pedagogical theories and technologies (V.L. Benin, A.S. Gayazov, L.P. Krivshenko, I.P. Podlasy, V.A. Slastenin, etc.);
- implementation of innovative methods and forms of teaching to increase cognitive activity (Yu.K. Babansky, L.V. Zankov, P.I. Pidkasisty, A.Z. Rahimov, K.Z. Talizina, V. Eshteynberg and others);
- application of information and computer programs to the educational process (V.P. Bepalko, I.G. Zakharova, V.L. Latishev, E.I. Mashbits, V.M. Monakhov and others);
- automated educational systems based on computer and audiovisual technologies (B.I. Andreev, N.G. Dyachenko, T.A. Ilyina, G.M. Khodjaspirova, A.V. Smirnov);
- development of music education methodology and problems of music education and upbringing of schoolchildren (E.B. Abdullin, Yu.B. Aliev, O.A. Apraksina, L.G. Dmitrieva, D.B. Kabalevsky, G.P. Sergeeva, N. M. Chernovivanenko, L.V. Shkolyar and others);
- use of music and computer programs abroad (A. Bentin, P. Gorges, A. Merk, V. Rollin);
- computerization of music education (V.V. Medushevsky, A.A. Podajanskaya, S.P. Polozov);
- development of musical hardware and software (S.V. Puchkov, A.A. Ustinov, S.A. Cheldiev);
- formation and development of electronic music creativity in the system of general music education (I.R. Aidarova, A.O. Borozdin, A.E. Gimro, N.G. Glagoleva, I.M. Krasilnikov and others).

There is an increase in the problem of shaping and development of schoolchildren in the educational process P.V. Buborisova, R.P. Draskova, N.A.A. N.A. Kyyacheeva, A.V.P.P. PLAKAKAVO, O.V.P. Eugakhova, E.Sh. Researchers like Krasnozhanova it is evidenced in many candidate theses. Aspects of personal development using computer programs in education also turned out to be important to us.

Modernization of music education, improvement of its quality, development of innovative approach and promising methods and introduction into teaching practice are among the tasks facing every general secondary school. The assumption that the use of computer programs in music lessons in general secondary schools is an effective means of developing the cognitive activity of 5th-7th grade students took the main place in this work and determined the relevance of the research topic.

However, what has been mentioned allows us to emphasize that the theoretical and practical materials collected in the system of pedagogy and music education are not enough to solve the following contradictions:

- between the acceleration of the process of informatization of society, the constantly growing flow of new knowledge in the music education system, and the lack of effective use of computer programs in the fields of cognitive activity of schoolchildren;

- between society's high need for people who are able to perform active cognitive activities using the synthesis of computer programs and music art, and insufficient musical and computer literacy of modern music teachers in the implementation of this process in the school education system;
- between the need to introduce computer programs to the process of improving the artistic and performance skills of junior schoolchildren in music lessons and the lack of educational and methodological support for this process.

These contradictions give rise to the research problem, which consists of the need to determine the theoretical foundations, experimental verification of pedagogical conditions, and the need to develop a structural-functional model of improving the artistic and performance skills of 5-7th grade students in music classes using computer programs.

**The relevance of the problem**, on the one hand, its insufficient development in the system of music education for schoolchildren, and on the other hand, determined the choice of the research topic: "Technology of development of competencies for working with computer programs in improving the artistic and performance skills of students in music classes" (grades 5-7 example).

**The purpose of the research** is to develop pedagogical conditions that ensure the success of forming the activity of improving artistic and performance skills of 5-7th grade students in music lessons using computer programs, theoretical justification and experimental testing.

**The object of research** is the system of music education for 5th-7th grade students using modern information technologies.

**The subject of the study** is the process of developing the competencies of working with computer programs and improving the artistic and performing skills of 5th-7th grade students in music classes using computer programs.

**Research hypothesis:** the technology of developing competencies for working with computer programs (in the case of grades 5-7) will be successful in improving the artistic and performance skills of students in music classes, if:

- development of a structural-functional model of formation of cognitive activity of 5th-7th graders in music lessons using computer programs based on personality-oriented and activity-based approaches;
- implementation of a set of pedagogical conditions, including:
  - a) optimal combination of traditional forms and methods of teaching music with game, cognitive and expressive capabilities of computer programs as a way of increasing the cognitive activity of 5-7 graders;
  - b) educational and methodological provision of music lessons at school using computer programs developed taking into account the age and individual characteristics of 5th-7th grade students;
  - v) development of a set of diagnostic procedures that will allow to determine the stages of formation of the activity of improving artistic and performance skills and monitor the process of teaching music to students of 5-7 grades using computer programs.

**The purpose and hypothesis of the dissertation research determined the need to solve the following problems:**

- to reveal the essence of the concepts "activities to improve artistic and performance skills of 5-7th grade students", "musical and computer literacy of 5-7th grade students", computer programs in music education" within the scope of the studied topic;
- development of a structural-functional model and pedagogical conditions for formation of cognitive activity of 5th-7th grade students in music lessons using computer programs and experimental verification of effectiveness;

- to clarify and fill in criteria level characteristics and indicators of monitoring the process of formation of cognitive activity of 5th-7th grade students using computer programs, as well as diagnostic tools;
- Development of teaching-methodical materials using computer programs that ensure creative and personal development of 5th-7th grade students in improving their artistic and performance skills.

### **The theoretical and methodological basis of the research:**

- philosophical ideas about computerization of education (V.A. Geroimenko, B.S. Gershunsky, A.I. Rakitov, V.P. Rachkov);
- theories of holistic pedagogical process (I.F. Isaev, L.P. Krivshenko, B.T. Likhachev, P.I. Pidkasisty, V.A. Slastenin, I.F. Kharlamov);
- theoretical and practical studies on informatization and computerization of education (M.V. Klarin, V.L. Latishev, E.I. Mashbits, V.B. Popov and others);
- psychological-pedagogical theories of computerization of the music education system (I.R. Aidarova, A.O. Borozdin, P.L. Zhivakin, I.M. Krasilnikov, S.P. Polozov and others);
- theoretical justification of the choice of pedagogical technologies in the educational system (V.P. Bepalko, V.V. Guzeev, V.S. Kukushin, M.I. Makhmutov, E.S. Polat, G.K. Selevko, N.S. Sytina, V.E. Steynberg and others);
- activity-based personality development theories (K.A. Abulkhanova-Slavskaya, L.S. Vygotsky, B.V. Davydov, L.V. Zankov, A.N. Leontiev, V.N. Myasishchev, S.L. Rubinshtein);
- organizes didactic developments (L.P. Aristova, Yu.K. Babansky, B.P. Esipov, I. Ya. Lerner, A.Z. Rahimov, K.Z. Talizina, T.I. Shamova, G.I. Shchukina, V.S. Yurkevich) on improving the artistic and performance skills of a person.

The following research methods were used to solve problems and check starting points: theoretical (induction and deduction, analysis and synthesis, comparison and generalization of philosophical, psychological-pedagogical, musical-pedagogical literature, dissertation research, periodical scientific publications, normative studies).

- Music science documents, curricula and programs;
- modeling the process of teaching music to 5th-7th grade students using computer programs);
- empirical (methods of data collection and collection - continuous, non-involved, direct and indirect observation, interview, questioning, test; control and measurement methods - sections, tests);
- data processing methods - according to graphs and tables, mathematical and statistical;
- methods of introducing research results into teaching practice - designing a pedagogical experiment and predicting research results).

The study was conducted in stages from 2016 to 2023.

### **The first stage** - organizational-preparation (2016-2018):

- analysis of philosophical, psychological, pedagogical and methodological literature on the studied problem;
- retrospective analysis of pedagogical practice; identification of the problem area and development of a qualitative research apparatus;
- selection and development of diagnostic measurement methods based on criteria and levels of formation of cognitive activity of 5th-7th grade students in music lessons using computer programs;
- Conducting experiments with students of control and experimental classes of general secondary schools of the Republic of Uzbekistan.

### **Second stage formative (2018-2021):**

- development of a structural-functional model of the formation of technology activity for the development of competences for working with computer programs in improving the artistic and performing skills of 5-7th grade students in music classes using computer programs;
- defining and justifying the pedagogical conditions for its effective implementation;
- development and implementation of educational and methodological support (development of programs, recommendations, electronic resources);
- research hypothesis testing.

### **The third stage - analytical-final (2021-2023):**

- processing and analysis of research results using methods of systematization and summarization of obtained results;
- qualitative and quantitative analysis of experimental data, statistical and mathematical processing;
- formation of conclusions and literary presentation of the research work in the form of a dissertation.
- The experimental base for the study was formed by:
- Andijan region, Fergana region and Namangan region pre-school and general secondary schools under the school management.

### **The scientific novelty of the research is as follows:**

- with the help of hearing and vision analyzers, the effective effect of computer technology as a unique means of learning music in the process of active cognitive activity of 5th-7th graders was theoretically substantiated and experimentally proven;
- to form the activity of improving artistic and performance skills of 5th-7th grade students in music classes using computer programs in general secondary schools, a systematic approach to facilitate understanding of musical art through television, animation, graphics, sound and communication. a functional model is developed;
- educational-methodical "Music and computer programs in grades 5-7", which provides a set of pedagogical conditions for the formation of the activity of improving the artistic and performance skills of students of the 5th-7th grade using computer programs in music lessons, including stimulation as a didactic tool based on the complex, the stimulation of musical and creative activities of students was determined and justified.
- criteria-level evaluation apparatus (personal-qualitative, cognitive, emotional-volitional, musical-activity; reproductive, reproductive-search, heuristic, creative), as well as diagnostic tools allowing to define and explain the formation were defined and completed. The activity of improving the artistic and performance skills of schoolchildren was demonstrated in music lessons using computer programs

### **The theoretical significance is as follows:**

- "Activities to improve the artistic and performance skills of 5-7th grade students", "Musical and computer literacy of 5-7th grade students", "computer programs in music education" that reveal the essence of the process of increasing the cognitive activity of 5-7th grade students the essence of their concepts was clarified through the creative development of music using information and communication technologies (synthesizer, interactive whiteboard, multimedia, Internet, etc.);
- the use of the structural-functional model of forming the activity of improving the artistic and performance skills of 5th-7th graders in music lessons using computer programs in the practice of a modern general secondary school as a way and means of achieving a socially acceptable level (result) of personal development was theoretically justified.

### **The practical significance of the research is as follows:**

- In order to form the activity of improving the artistic and performing skills of 5-7th grade students, the educational-methodical complex "Music and computer programs in 5-7th grades" was developed and experimentally tested (music program for 5-7th grades, electronic music for music teachers resource and methodological recommendations);
- diagnostic tools (written survey, creative assignments, questionnaires, etc.) were offered to determine the level of formation of activity of improving artistic and performing skills of 5th-7th grade students in music classes using computer programs.

### **The following rules apply to protection:**

1. The effectiveness of mastering the main program of music education in grades 5-7 using computer programs creates a basis for the formation of knowledge activity taking into account the individual age, psychological and physiological characteristics of students of grades 5-7. In achieving personal, social and cognitive development, the content of education, the methods of organizing activities and the interaction of subjects of the educational process play a decisive role. The activity of improving the artistic and performance skills of students formed in the process of developing artistic, imaginative, emotional and value perception skills of music works using computer programs is manifested in creative works in an active attitude to the surrounding world, interests in working with computer programs, motives, etc. Accordingly, the concept of "activities to improve the artistic and performance skills of 5-7th grade students" within the framework of the research is related to the need to master the art of music using computer programs described as a value-based relationship. The concept of "musical and computer literacy of 5th-7th grade students" is to acquire the skills and abilities to use music and computer tools to achieve the goal of forming primary theoretical knowledge about music and computer programs, improving artistic and performance skills in the artistic and creative process. "Computer programs in music education" - use of computer programs and relevant information technologies in pedagogical practice; Providing the necessary text, audio, visual information that complements the content of music education in grades 5-7, a tool for managing the process of forming cognitive activities of schoolchildren of grades 5-7.
2. Improving the effectiveness of general music education of 5-7 graders is achieved by introducing the structural-functional model of formation of their cognitive activity in music lessons using computer programs, which includes:
  - target block goals, tasks and methodological approaches are determined;
  - content-procedural block - educational-methodological complex "Music and computer programs in grades 5-7" (author's music program for grades 5-7, methodological recommendations, electronic resource), system of organizational forms and methods using computer programs;
  - result-evaluation block, which includes levels (creative, heuristic, search-reproductive, reproductive), criteria (personal-quality, formation of artistic and performance skills, emotional-volitional, musical-activity), activity of artistic and performance skills of junior schoolchildren determines the indicators and results (formation of artistic and performance skills formation activities of 5-7th grade students in music classes using computer programs).
3. The complex of pedagogical conditions for the formation of cognitive activity of 5th-7th grade students in music lessons using computer programs includes:
  - optimal combination of traditional forms and methods of music education with computer programs for formation of game, artistic and performance skills and expressive possibilities;
  - educational and methodological provision of music lessons in the 5th-7th grade using computer programs developed taking into account the age and individual characteristics of the students of the 5th-7th grade of the general secondary education school;

- development of a set of diagnostic procedures to determine the stages of formation of activity in the formation of artistic and performance skills and to monitor the process of teaching music to students of the 5th-7th grade of the general secondary school using computer programs.

**The reliability and validity of the research results is ensured by the initial methodological and theoretical positions:**

- experimental testing of the structural-functional model and pedagogical conditions for its implementation;
- use of a set of theoretical and experimental research methods, duration of experimental work;
- reproducibility of research results and representativeness of obtained data;
- use of mathematical statistical methods in processing research results.

Effectiveness of the educational-methodical complex for improving the artistic and performance skills of 5-7th grade students in music lessons using computer programs as a teacher-musician-researcher and consultant in the implementation of the research results in educational, scientific-methodical and educational-organizational activities. It was tested in the educational practice of 5-7th grade students.

Testing and implementation of the results of the main rules of the research was carried out at scientific and practical conferences:

5 training manuals, one textbook, 2 monographs, 5 methodological manuals, 3 collections and 56 scientific articles.

The main rules and results of the research were discussed at the meetings of the Departments of Fine Arts and Music Education of the Andijan State Pedagogical Institute.

The results of the research are reflected in 14 publications;

5 training manuals, one textbook, 2 monographs, 5 methodological manuals, 3 collections and 56 scientific articles.

### **Summary of chapters.**

The presented generalized quantitative indicators fully confirmed the scientific hypothesis put forward by us: the organization of the educational process using computer programs in music lessons creates a high level of cognitive activity in high-achieving schoolchildren, which leads to effective and successful learning even in the teaching of low-achieving students.

Such learning required a lot of time to prepare technical equipment to accompany the music-pedagogical educational process. The interest of 5th-7th grade students in the subject of "Music" comes from a deep understanding of the importance and significance of the art of music in human life. Our research confirmed the position that the technology of developing the competences of working with computer programs in improving the artistic and performance skills of students in music classes is a changing category, its change is greatly influenced by the computer programs used by the music teacher in the music classes of the general secondary school.

Experimental studies have confirmed the pedagogical possibilities of using computer programs as an effective means of developing the technology of developing the competencies of working with computer programs in improving the artistic and performance skills of 5-7th grade students in music classes. With a targeted educational strategy taking into account the capabilities of computer programs, the interest of 5-7th grade students in music lessons will increase, their intellectual level will increase, their horizons will expand, their educational motivation will increase, and their emotional sphere will be enriched.

Thus, 97% of students said that they want such classes to be held more often. Accordingly, during the lesson, during the experiment, they formed a positive emotional attitude towards the subject, because the students' attention remained stable throughout the lesson. After studying new topics for grades 5-7,

diagnostic tests in the form of test questions to determine the level of mastery of knowledge, skills and competences showed the mastery of the educational material after conducting music lessons using computer programs. Increases by 30%, and the amount of learned material increases by 20-25%, as a rule, the grades are higher. Student participation in music classes and extracurricular activities increased significantly (by 15.0 percent on average).

The question of how to reduce the fatigue of 5-7th grade students in classes using computer programs is still open, but in order to eliminate them, we proposed physical education and eye exercises in the methodical recommendations for music teachers.

We determined pedagogical conditions (optimum combination of traditional forms and methods of music education with the technology and expressive capabilities of computer programs in improving game, artistic and performance skills; music in grades 5-7 using computer programs developed according to age and age teaching-methodical provision of classes; individual characteristics of 5-7th grade students of general secondary school; determining the stages of forming the technology of development of competences for working with computer programs in improving artistic and performance skills of students of general secondary school using computer programs Development of a set of diagnostic procedures that allows monitoring the process of teaching music to 5th-7th grade students) confirmed their necessity and effectiveness in the process of experimental work.

The study showed that most of the 5th-7th grade students in the experimental group achieved high emotional, valuable and intellectual results in music lessons using computer programs. The activity of artistic and performance skills of 5th-7th grade students in active participation in solving problems discussed in class (completeness of answers, independent thinking, questions to the teacher, their nature and direction), attitude to additional assignments, interest in specialized classes, participation in various activities, music and extracurricular activities using computer technology, levels of independence in completing assignments, and high quality of knowledge, skills, and competencies, as well as their compliance with program requirements, were demonstrated.

The results of the experiment showed that 75% of the 5th-7th grade students in the experimental group had advanced artistic and performance skills, while in the control group, despite some positive dynamics, the general level of musical and creative self-awareness remained low. Consequently, the implementation of the developed structural-functional model using computer programs was effective, and the analysis of the progress and results of the experimental stages confirmed the hypothesis of the dissertation research.

Thus, the results of the formation of knowledge activity in improving the artistic and performing skills of 5-7th grade students and the effectiveness of the system-functional model we developed for improving the artistic and performing skills of 5th-7th grade students in music lessons using computer programs.

### **CONCLUSION**

Today, informational and technological changes in society require a new approach to the organization of music lessons in the general secondary education system. Currently, at the time of the decline of morality, the depreciation of morality, and the processes of reorganization of emphasis in the understanding of the importance of universal values, it is becoming an urgent task to educate a general secondary school student as a socially important person through the means of musical art. Taking into account the reality of the present time, it is clear that it is necessary to build the pedagogical paradigm based on the principles of humanism and individual orientation, taking into account the use of modern information and computer programs in practical activities. This task cannot be carried out without the educational and development opportunities of art together with the technical support of computer programs.

Overall, the study found that the rapid growth of computer software in the service market has led to their penetration into the music education system. It should be noted that the development of the technology of developing the competence of working with computer programs in improving the artistic and performance



skills of students has proven to be an effective means of encouraging schoolchildren to learn the art of music.

However, standard issues related to the need to purchase additional equipment, electronic products, and teacher training remain open. The results of the study are based on the use of computer programs that provide a combination of traditional methods and forms using computer programs in a modern high school, including a curriculum for 5-7th grades in Music, electronic resources and methodological recommendations "in 5th-7th grade". music and computer programs" has proven the necessity and effectiveness of developing a teaching-methodical complex.

In the framework of our research, the theoretical foundations of the study of the problem of the development of the technology of development of the competences of working with computer programs in improving the artistic and performance skills of adolescents were determined.

182 schoolchildren were enriched with the conceptual apparatus using computer programs in the music lessons of the general secondary school, which determines the specificity of the work of the developed structural-functional model, its implementation as an art lesson, taking into account the existing pedagogical conditions. should be implemented during the educational process in the music class.

The review of meaningful aspects of technology in different areas helped to open the concepts "Activities to improve artistic and performance skills of 5-7th grade students", "Musical and computer literacy of 5-7th grade students", "Computer programs in music education". We present in music lessons using computer programs (synthesizer, computer, multimedia technologies, various software and note editors) in various forms as one of the means of forming artistic and performance skills of students of 5-7th grade, which are described as an active attitude to learning, is manifested in interests, motives and needs for computer programs. The formation of artistic and performance skills is a complex concept and a developing, changing, socially conditioned category related to the education of a comprehensively developed personality.

In our opinion, forming the activity of improving the artistic and performance skills of students of the 5th-7th grades through the technology of developing the competences of working with computer programs is a set of conditions, methods and methods that stimulate their activity, striving for improvement, deepening of knowledge, satisfaction of cognitive needs, and success in musical activities. is mounted.

In the process of solving the problems posed in the research, the following results, which are reflected in teaching practice, were achieved:

- Pedagogical conditions that help to increase the efficiency of the process of improving the artistic and performing skills of the 5th-7th grade students of general secondary education in music lessons using computer programs were identified and justified;
- the transformative possibilities of computer programs in the music education system, which are necessary for the formation of the knowledge activity of schoolchildren in the conditions of the minimum study time allocated for music in the school curriculum, were determined;
- methods and forms of music teaching using computer programs were experimentally tested in order to optimize the process of music education in a general secondary school;
- experience has been gathered on systematizing promising forms, tools and methods of using computer programs in music lessons, contributing to the improvement of artistic and performance skills of 5-7 graders;
- based on personality-oriented and activity-based approaches, using computer programs, a systematic-functional model of formation of cognitive activity in music lessons of 5th-7th grade students was developed, theoretically substantiated and put into practice.

The proposed structural-functional model of improvement of artistic and performance skills of 5th-7th grade students using computer programs in music lessons of general secondary schools showed its effectiveness and practical significance during the experimental test process.

- The results reflecting the dynamics of the activities of improving artistic and performing skills of 5th-7th grade students are important in ensuring the implementation of the structural-functional model developed using the pedagogical conditions we identified for improving the artistic and performing skills of students. Comparison with experimental data; within the scope of experimental work, criteria and indicators for determining cognitive activity of 5th-7th graders, diagnostic tools were identified and completed;
- The educational-methodological complex "Music and computer programs in grades 5-7" (music program for grades 5-7, electronic resource and methodical recommendations) was developed taking into account specific conditions, specific features of using computer programs, and music classes, age and individual characteristics of 5th-7th grade students were experimentally tested.

In our opinion, educational computer games and entertaining computer literacy lessons, situational role-playing games using computer capabilities, various musical activities using computer programs - all this makes music lessons interesting, useful and will help if necessary. However, depending on age characteristics, the dosage and time of their use should be taken into account, and most importantly, traditional methods should be skillfully combined with the use of computer programs.

The comparative analysis of the results obtained during the experimental work allows us to conclude that the use of computer programs in music lessons has an effective effect on the knowledge of music of 5th-7th grade students. This confirms the effectiveness of our work and the correctness of the model theoretical rules. Lessons using computer programs help to meet cognitive needs, redirect behavioral motives, and develop a positive attitude toward music. In addition, the correct use of computer programs, organically included in the lesson plan, develops students' creative abilities, determines their emotional stability and goodwill towards the educational process, reduces the risk of individual and group aggression of students towards their peers, and has a positive effect on students.

Considering that the artistic and performance skills at all levels (high, medium, moderate and low) did not change significantly after the experiment in the control group, while in the experimental group the high level increased by 15.0% above the average. level - decreased by 10.0%, medium level - by 9.0%, low level - by 18%.

The above statistics show that the use of computer programs has a positive effect on the process of music education, and their use in combination with traditional teaching is more effective.

An important evidence in favor of the result of our research is the fact of improving the skills of music teachers in the field of mastering computer programs. This arrangement allowed the students to have in their teacher not only an attentive, but also a highly professional computer user.

Thus, the results of the research made it possible to prove that the optimal combination of traditional methods will be more successful in improving the artistic and performance skills of 5-7th grade students in music classes using computer programs in a general secondary school, if the pedagogical conditions we identified are met:

- Forms and methods of teaching music with computer programs with game, cognitive and expressive capabilities as a way to increase the cognitive activity of 5-7 graders;
- educational and methodological provision of music lessons using computer programs developed taking into account the age and individual characteristics of 5th-7th grade students;
- development of a set of diagnostic procedures that will allow to determine the stages of improvement of artistic and performance skills and monitor the process of teaching music to 5-7 graders using computer programs.

The dynamics of the research results confirm the compatibility of the research logic we have chosen, the effectiveness and practical expediency of the structural-functional model developed to improve the artistic and performance skills of 5-7 graders in music classes of general secondary schools using computer programs.

Thus, the stated tasks of the research were completed and the proposed hypothesis was confirmed by the results of work conducted with 5-7 grade students.

This study does not resolve the issues raised in it regarding the improvement of artistic and performance skills of schoolchildren in music lessons using computer programs for different age groups.

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