

Using the cluster approach in the education of the artistic profile

M.V. Doronina^{1*}

¹ K.E. Tsiolkovsky Kaluga State University, Kaluga, Russia

Abstract. The article discusses the concept of "educational cluster", describes the features of the cluster approach in aesthetic education in institutions of supplementary education. It is suggested that applying the cluster approach in aesthetic activity, the artistic abilities of children are fully developed. The experiment is described and conclusions are drawn on the topic of the article.

1 A problem statement

One of the problems of the traditional education system is the autonomy of its individual links. This is expressed in the fact that the content of preschool, school and supplementary education is focused only on a certain age with support for specific goals.

Within the framework of preschool aesthetic education, the child receives the necessary knowledge and skills. But at the same time, she faces difficulties when entering a children's art school, an art or theater school, a choreographic studio. The reason is hidden in the inconsistency of educational practices that are implemented at different stages of art education [1].

The use of the cluster approach in the education of the artistic profile makes it possible to effectively use the characteristic features of educational institutions. A convenient tool for broad interaction within the cluster appears; personnel policy is improving; there is an infrastructure for the creation of art projects and the development of an aesthetic direction; opportunities appear for more successful pedagogical and scientific-pedagogical work [2].

History knows the facts of using the elements of cluster education in artistic activity. In the East, there were "schools of ustoz" where they studied musical art in unity with life psychology. They were combined into large corporations that held social events and celebrations [3].

Different variants of the cluster approach to the organization of the education system can be observed in the pedagogical activities of the Russian writer and teacher L.N. Tolstoy, innovative teachers S.T. Shatsky and V.N. Shatskaya, Swiss teacher Jacques Dalcroze and German composer and teacher Karl Orff [4].

Lev Nikolaevich Tolstoy established a network of 14 primary schools in the vicinity of Yasnaya Polyana, with courses for teachers and a pilot school in the center.

* Corresponding author: ipcs-profped@yandex.ru

V.N. Shatskaya and S.T. Shatsky in 1919, he opened the First Experimental Station for Public Education. It included groups of children of different ages, nurseries, kindergartens, schools, clubs, workshops, libraries.

In addition to creating a "vertical" structure of the educational cluster, V.N. Shatskaya proposed to comprehensively use various types of art in the education of children and youth. In the process of artistic education, children were engaged in choral singing, playing musical instruments, listening to music and rhythm. This cluster structure provided a "horizontal" link: the use of all types of arts in art education.

Swiss teacher Jacques Dalcroze combined gymnastics, dance, pantomime, musical improvisation, vocals and theater, creating a new form of artistic creativity - rhythm. The successor of Dalcroze's ideas was the outstanding German composer Karl Orff - he created an original musical and artistic cluster system, combining musical improvisation, dance, poetry, pantomime and theater [5].

1.1 The objective of the work

In the Russian Federation, the use of the cluster approach in education seems to be very promising, since it can be implemented at various management levels, in different educational organizations, within the framework of any aesthetic disciplines [6].

The problem of the cluster approach in education has been studied by such scientists as V.P. Burdakov, V.T. Volov, T.M. Davydenko, E.A. Korchagin, A.V. Leontiev, G.V. Mukhametzyanova, N.B. Pugachev, P.I. Tretyakov, T.I. Shamova, Yurov [7].

In the works of T.I. Shamova describes such advantages of the educational cluster as identifying the strengths of the relevant direction in education, using effective tools, and creating a new high-quality education [8].

The cluster approach, being an effective educational resource for an artistic profile, has certain characteristics.

An educational cluster includes two or more educational institutions providing aesthetic education that effectively solve one or more educational or management tasks common to all educational institutions included in the cluster and related by a common goal [9].

It is possible to define two vectors for the development of the aesthetic cluster: "horizontal" and "vertical".

The "vertical" vector enriches the content of education in order to develop an aesthetic attitude to reality, and occurs due to the inclusion of other educational institutions and cultural institutions in educational activities. choreographic studios to art colleges and colleges of music.

The "horizontal" vector of enrichment of the content of education consists in the introduction of additional subjects of the aesthetic cycle into the curriculum. In choreographic studios, this is the study of acting; in music schools - classes in composition, improvisation, poetry and painting, in art schools - listening to music [5].

An innovation in aesthetic educational activity was the integration of traditional forms (lesson and elective) with specially designed forms ("creative workshop", art projects, lessons with elements of theatricalization, staging of musical fairy tales and musicals).

The integrated use of health-preserving pedagogical technologies, personality-oriented technologies, TRIZ technologies and gaming technologies [10] in all types of aesthetic activities proved to be effective [11].

In the twentieth century, the trend towards the synthesis of art forms manifested itself in the formation of an aesthetic attitude to reality, the development of poetic feeling and creativity.

At the beginning of the 21st century, in the book "The Nature of Artistic Talent" by V. Drankov, it was suggested that it is precisely in the interaction of various types of art, that is, with the cluster approach, that artistic abilities are formed [12].

This was explained by the fact that at different stages of the artistic process and in any form of art, the creator needs different types of aesthetic abilities. To understand the image of a hero, a painter, singer or writer needs acting skills. It is impossible to see the individuality of the character without seeing the appearance of the character through the eyes of a painter or sculptor, that is, the artistic activity itself contributes to the development of all types of artistic abilities [13].

2 Materials and the results of the research

In art pedagogy, when modeling content, the emphasis was placed on the assimilation of a large amount of artistic and aesthetic knowledge and skills that were necessary for creative activity. A narrowly focused approach to the development of artistic abilities corresponded to this concept, that is, the child could engage in only one type of aesthetic activity. Musical abilities developed only in musical lessons, the ability to visual arts only in painting classes, acting - in a theater studio, and dancing - in the process of choreographic studies. Often, the child was sent to aesthetic activities that the parents liked more, without taking into account his abilities and inclinations, knowingly depriving him of the opportunity to achieve success [14].

The aim of the work was to create an aesthetic cluster capable of developing a child's creative abilities and determining the artistic direction in which he will be most successful [15].

The tasks of developing artistic abilities were assigned to different disciplines.

Based on a theoretical analysis on this topic, we concluded that for the effective development of artistic abilities it is necessary to use a cluster approach.

One of the most complete classifications, based on functional systems, is successfully used in the diagnosis of the aesthetic cluster, presented by O. Luchinina. The teacher must analyze the manifestation of artistic abilities in seven groups [16].

- Thinking ability;
- Perceptual abilities;
- Attentive abilities;
- Mnemic abilities;
- Imaginative abilities;
- Sensory motor abilities;
- Communication skills.

20 children took part in the experimental work on the development and diagnosis of artistic abilities.

We diagnosed three functional systems (thinking, perception and imagination) using psychological tests. The level of development of the other four systems (attention, memory, sociability and motor abilities) was studied by observing children during diagnostic sessions.

To diagnose creative thinking, the P. Torrance test was used, in which four main indicators were assessed: fluency or productivity, flexibility, originality and development.

Perceptual abilities or perception abilities were diagnosed by the method "The Magic Land of Feelings" (T. Zinkevich-Evstigneeva). In the course of the study, we studied the psycho-emotional state of the child, the ability of children to identify different emotional states and the ability to understand emotional behavior. During the diagnosis of perceptual abilities, we noted that children had difficulties in identifying emotions and a lack of understanding of the characteristics of emotional behavior.

To identify imaginative abilities or abilities of imagination, the method “Non-existent animal” was used (Dukarevich M.Z.). We were interested in how the child is open to communication with other people and how much the child's creative potential is developed (Table 1).

Table 1. The level of development of the first block of abilities (thinking, perceptual, imaginative) at the beginning of the experiment.

State of the art	Thinking ability P. Torrance test	Perceptual abilities "The Magic Land of Senses" (T. Zinkevich- Evstigneeva)	Imaginative abilities "Non-existent animal" (Dukarevich M.Z.)
	amount of children	amount of children	amount of children
	%	%	%
High level	5	0	0
	1	0	0
Middle level	65	55	35
	13	11	7
Low level	30	45	65
	6	9	13

I.E. Domogatskoy [17] diagnoses such components as communication skills (sociability), sensorimotor abilities (development of the articulatory apparatus, fine motor skills, accuracy of movements and coordination), attentive abilities and mnemonic abilities.

The child's communication skills were tested as follows:

- how willingly the child enters into speech contact with the teacher;
- how proactive is the child in communication;
- how quickly the child joins the game;
- how quickly the child gets tired.

During the observation process, it was noticed that a significant part of children do not want to enter into verbal contact with the teacher and do not show initiative in communicating with other children, that is, they showed a low level of development of communication skills. Difficulties appeared to be included in play activities. The cause of the problems can be called both shyness of the child and hyperactivity, which made it difficult to understand the conditions of the game and the task. Rapid fatigue was observed.

Sensory motor abilities were diagnosed with the following exercises:

articulation apparatus work:

- exercise to test the mobility of the tongue;
- exercise to check lip mobility;
- say tongue twisters.

fine motor skills, movement precision and coordination:

- finger gymnastics;
- rhythmoplasty for hands;
- coordination exercises.

In the course of the lessons we observed the manifestation of motor abilities. Sensomotor abilities are associated with such concepts as the sense of rhythm, the work of the motor apparatus, the work of the articulatory apparatus, fine motor skills and coordination.

Children were given exercises for articulation, which included work on mobility, lips, and tasks for facial expressions. Difficulties were caused by tasks on the mobility of the language, since the percentage of children with speech therapy problems is high, and mimic exercises, since modern children, due to their passion for gadgets, are distinguished by low-expressive facial expressions.

We diagnosed fine motor skills using finger gymnastics.

Speech therapy problems are closely related to insufficient development of fine motor skills.

To diagnose attenuation and mnemonic abilities, exercises such as

- find the inaccuracy of a melody in a familiar song;
- find the sung sound on the piano;
- repetition of a small poem (two or four lines);
- repetition of tunes on one sound;
- repetition of the singing within a second or third [18] (Table 2).

Table 2. The level of development of the second block of abilities (communicative, sensitive, attentive, mnemonic) at the beginning of the experiment.

State of the art	Communication skills	Sensitive abilities	Attentive and mnemonic abilities
	%	%	%
	amount of children	amount of children	amount of children
High level	0	15	20
	0	3	4
Middle level	65	55	70
	13	11	14
Low level	35	30	10
	7	6	2

Tracking the dynamics of the development of artistic abilities was carried out through observation, diagnostic and training sessions, as well as test tasks.

Based on the functional systems presented above, for each of the seven groups, we identified three levels of manifestation of artistic abilities: high, medium, low, which in the course of work were an indicator of the success and effectiveness of the educational process.

The levels of manifestation of artistic abilities and the corresponding content-psychological characteristics, broken down by components, are presented in the table (Table 3).

Table 3. Criteria characteristics of the levels of manifestation of artistic abilities according to the classification of O. Luchinina.

High level	Middle level	Low level
Sensorymotor abilities		
Performs the simplest dance movements qualitatively, rhythmically, technically, expressively on his own initiative or joining the initiative of a peer. Carries out self-control. Knows many outdoor musical games, plays them with pleasure and involves others in them.	Performs the simplest dance movements rhythmically, technically following the example of an adult, but not always expressively and efficiently. Follows demonstration and explanation when learning rhythmic exercises, choreographic elements and dance numbers. He plays outdoor music games with interest, can name a few of them.	Performs the simplest dance moves poorly, imitating an adult. The rhythm is reduced. Self-performance is included during an adult or peer show. Continuing these actions on their own does not arise or rarely occurs. It is difficult to name outdoor musical games, plays them reluctantly, following other children.
Perceptual abilities		
Has an idea that music expresses emotions, mood, character of a person, elementary musicological	Has a primary understanding that music expresses the emotions and mood of a person. Emotionally responds to	Emotionally responds to vivid musical images. With the help of an adult and imitating his musical and visual movements. Interprets

High level	Middle level	Low level
ideas about the properties of musical sound. Understands the meaning of the "image", knows that you can use different means (voice, body, methods of playing instruments). To create your own musical images, character, mood, and can participate in a conversation with adults on this topic. Knows and can name the simplest dances, learn and reproduce elementary parts for children's musical instruments. Understands and explains in detail the change in mood in a piece of music.	"pictorial" images. With the help of an adult he interprets the character of musical images, expressive means of music. Knows that you can use different means (voice, body, playing techniques) to create your own musical images and can participate in conversations with adults on this topic. He knows the simplest dances, with the help of an adult he can learn elementary parts for children's musical instruments. With the help of an adult, explains the change in mood in a piece of music.	the character of musical images. However, it is difficult to participate in a conversation with adults on this topic. Knows the simplest dances, and can participate in them when targeting an adult and peers. Understands that music conveys emotions and feelings. However, even with the help of an adult, it is significantly difficult to explain the change in mood in a piece of music. Gives uninformative, stereotypical or incorrect answers.
Attentive and mnemonic abilities		
Repeat the listened melody exactly; recognize the voices of animals, birds, musical instruments in the listened musical compositions. Knows the means of musical expression, genres and musical directions.	They do not always accurately repeat the listened melody; recognize the voices of animals, birds, musical instruments in the listened musical compositions. Knows the means of musical expression, genres and musical directions.	They find it difficult to repeat the melody they listened to; they do not always recognize the voices of animals, birds, musical instruments in the listened musical compositions. It is difficult to determine the means of musical expression, genres and musical directions.
Imaginative abilities		
Is able to come up with an original fairy tale, verse or song.	Is able to come up with a fairy tale, verse or song on the proposed topic or starting from the everyday statements of children.	Difficulty coming up with a fairy tale, verse or song on the proposed topic or starting from the everyday statements of children.
Communication skills		
Observes the culture of behavior and rules of conduct in collective musical and artistic activities. Formulates requests and desires related to musical and artistic activities. Shows the need and desire for independent performance.	Interacts with peers in joint musical activities (listening, singing, dancing, elementary playing music). With the help of an adult in the process of such activities, he formulates requests and desires related to musical and artistic activities.	Difficulty interacting with peers in joint musical activities (listening, singing, dancing, elementary playing music). In the process of such activities, it is difficult to formulate requests and desires related to musical and artistic activities.
Thinking ability (theoretical and performing)		
Shows a steady interest in various types of musical activity. Knows how to coordinate hearing and voice, perform songs in a choir. Possesses singing skills (purity of intonation, breathing, diction, coherence). Improvises in her preferred musical activities.	Shows interest in various types of musical activity, the most stable interest in one of its types. Can sing independently and perform songs in a choir, but finds it difficult to coordinate hearing and voice.	Does not show a pronounced interest in various types of musical activity or any one of its types. Difficulty coordinating hearing and voice.

As for the diagnostic sessions, they were built in the form of a game or as a short session using playful techniques. During the diagnostic music lessons, pedagogical observation was carried out.

When performing tasks, attention was paid to the following:

- the child's interest in the task;
- pace of work;
- independence;
- contact of the child;
- psychophysiological fatigue.

Let us turn to the result and discussion of the formative experiment, where the proposed hypothesis was corrected and tested (Table 4).

Table 4. The level of development of the first block of abilities (thinking, perceptual, imaginative) at the end of the experiment.

State of the art	Thinking ability P. Torrance test	Perceptual abilities "The Magic Land of Senses" (T. Zinkevich- Evstigneeva)	Imaginative abilities "Non-existent animal" (Dukarevich M.Z.)
	%	%	%
	amount of children	amount of children	amount of children
High level	30	20	20
	6	4	4
Middle level	70	70	55
	14	14	11
Low level	0	10	35
	0	2	5

Diagnostics of P. Torrens made it possible to study the level of development of creative thinking. Originality, fluency and flexibility were shown in creating new images. Perceptual abilities were diagnosed by the method "The Magic Land of Feelings" (T. Zinkevich-Evstigneeva). During the experiment, children learned to identify and understand different emotional states and emotional behavior. To identify imaginative abilities or abilities of imagination, the method "Non-existent animal" was used (Dukarevich M.Z.).

Students in the experimental group demonstrated openness in communication with other people and the development of creativity (Table 5).

Table 5. The level of development of the second block of abilities (communicative, sensitive, attentive, mnemonic) at the end of the experiment.

State of the art	Communication skills	Sensitive abilities	Attentive and mnemonic abilities
	%	%	%
	amount of children	amount of children	amount of children
High level	35	45	40
	7	9	8
Middle level	60	55	50
	12	11	10
Low level	5	0	10
	1	0	2

Sensomotor abilities (motor abilities) in children after the experiment manifested themselves in the ability to coordinate their movements with music.

Communication skills have been demonstrated in the process of stage behavior and communication.

Attentive and mnemonic abilities were used in the attentive memorization of aesthetic material, in the ability to use mnemonic techniques.

Positive changes in the indicators of the development of children's artistic abilities during the experiment became possible due to the competent construction of the educational process using the cluster approach.

3 Conclusions

It was noted that during the experimental work, there were gradually positive changes in the motivational tendencies and preferences of students. With a comprehensive assessment of the effectiveness of the development of artistic abilities using the cluster of abilities, it was found that the indicators of the levels of mental, perceptual, imaginative, communicative, mnemonic, attentive and sensitive abilities underwent positive growth dynamics.

It follows from this that the use of a cluster approach in work, which contributes to the development of children's artistic abilities, makes it possible not only to reveal the individual characteristics of each child, but also to contribute to his full-fledged spiritual improvement.

References

1. M.V. Korepanova, *Continuous education of preschoolers and younger students: problems and prospects*, Continuous education for preschool and Junior school children problems and prospects, **2**, 88-92 (2014)
2. E.N. Semykina, *Cluster approach in education and upbringing*, Siberian pedagogical journal, **5**, 132-136 (2010)
3. R.G. Kadyrov, *Musical psychology*, p. 80 (Uzbekistan: Musika, 2005)
4. M.V. Doronina, Cluster approach in aesthetic education, World Of Innovation, **3**, 21-26 (2019)
5. A. Nikitin, *Artistic giftedness and its development in childhood*, p. 352 (Peter, 2017)
6. V.I. Klenina, L.I. Klenina, *Cluster approach in the system of continuing education*, Scientific heritage of T.I. Shamova and his influence on the solution of urgent problems of modern education, **2**, 186-190 (2011)
7. S.V. Danilov, M.I. Lukyanova, *Cluster approach in regional education*, [Electronic resource] <https://science-education.ru/ru/article/view?id=18896> (2015)
8. V.I. Tarlavsky, *Cluster approach to the development of vocational guidance potential of the region*, Fundamental Research, **11**, 639-643 (2014)
9. E.Yu. Rivkin, *A cluster approach to the management of methodological activities*, [Electronic resource] <http://nauka.x-pdf.ru/17pedagogika/290713-1-treti-vserossiyskie-shamovskie-pedagogicheskie-chteniya-nauchnoy-shkoli-upravleniya-obrazovaniem-nauchnoe-nasledie-shamovoy.php>
10. M.V. Zhirova, *Children's game, or game technology used in a preschool educational institution for the full development of children scientific*, Education: past, present and future, p. 22-24 (Krasnodar, 2018)
11. T.V. Khabarova, Pedagogical technologies: concept and basic characteristics, p. 80 (SPb, "Publishing House" Child Press", 2011)
12. V.L. Drankov, The nature of artistic talent, [Electronic resource] <https://science-education.ru/ru/article/view?id=18896> (2001)

13. N.S. Leites, *Psychology of giftedness of children and adolescents*, p. 416 (Moscow: Publishing Center "Academy", 1996)
14. M.V. Doronina, *The cluster approach as an innovation in the development of musical talent*, *Personality in space and time*, **8**, 98-105 (2019)
15. M.V. Doronina, *Development of the aesthetic cluster in preschool education*, *New technologies in the educational process and production: Materials of the XVIII International Scientific and Technical Conference*, p. 509-512 (Ryazan, 2020)
16. O. Luchinina, E. Vinokurova, *Some secrets of the development of musical abilities*, Electronic resource <https://infopedia.su/15x9795.html> 9
17. I.E. Domogatskaya, *Methodology for the diagnosis of aesthetic abilities in children 3-5 years old*, p. 16 (Moscow: Klassika, 2004)
18. V.P. Anisimov, *Diagnostics of the musical abilities of children*, p. 128 (Moscow: Humanit. ed. center VLADOS, 2004)