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INTEGRATION OF INTERDISCIPLINARY AND EDUCATIONAL NETWORKS IN MODERN ART EDUCATION: CLUSTER APPROACH AND INNOVATIVE COOPERATION

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Abstract
The integration of interdisciplinary and educational networks in artistic education creates broad opportunities for the cluster approach and innovative cooperation. This article analyzes the possibilities of developing interdisciplinary research and interdisciplinary cooperation in the education system, the methods and techniques that can be used in it. The sustainability and efficiency of the continuous education and research system formed on the basis of interdisciplinary integration, its role in innovative development are clarified.
Also, in accordance with the reforms being carried out in the field of education, the widespread implementation of cluster methodology in art education and the development of a culture of interdisciplinary connections are recognized as one of the priority areas of modern pedagogy. It is emphasized that such an integrated approach will serve to improve the quality of art education and raise the educational process to an innovative level.

Keywords: cluster approach, interdisciplinary integration, fine arts education, transdisciplinarity, continuing education, university-school cooperation, project-based learning, ICT and interactive methods, creative and professional competencies, education-science-production connection.

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Introduction

ZAMONAVIY BADIIY TA'LIMDA FANLARARO VA TA'LIM TARMOQLARI INTEGRATSIYaSI: KLASTER YoNDAShUVI VA INNOVATSION HAMKORLIK

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Annotatsiya:
Badiiy badiiy ta'limda fanlararo va ta'lim tarmoqlari integratsiyasi klaster yondashuvi va innovatsion hamkorlikni ta'minlash uchun keng imkoniyatlar yaratadi. Ushbu maqolada ta'lim tizimida fanlararo tadqiqotlar va tarmoqararo hamkorlikni rivojlantirish imkoniyatlari, unda foydalanish mumkin bo'lgan metod va usullar tahlil qilinadi. Fanlararo integratsiya asosida shakllangan uzluksiz ta'lim-tarbiya va ilmiy-tadqiqot tizimi barqaror hamda samaradorligi, innovatsion taraqqiyotdagi o'rni aniqlashtiriladi.
Shuningdek, ta'lim sohasida olib borilayotgan islohotlarga muvofiq holda, badiiy ta'limda ham klaster metodologiyasini keng tatbiq etish va fanlararo aloqadorlik madaniyatini rivojlantirish zamonaviy pedagogikaning ustuvor yo'nalishlaridan biri sifatida e'tirof etiladi. Bunday integratsion yondashuv badiiy ta'lim sifatini oshirishga hamda ta'lim jarayonini innovatsion bosqichga ko'tarishga xizmat qilishi ta'kidlanadi.

Kalit so'zlar: klaster yondashuvi, fanlararo integratsiya, tasviriy san'at ta'limi, transdisiplinarlik, uzluksiz ta'lim, universitet–maktab hamkorligi, loyiha asosida o'qitish, AKT va interaktiv usullar, ijodiy va kasbiy kompetensiyalar, ta'lim–fan–ishlab chiqarish aloqasi.

Introduction

The rapid development of international cooperation in various spheres of life and the process of globalization require the introduction of innovative approaches to the education system. In particular, increasing the quality and competitiveness of education in higher education institutions, active participation in the comprehensive reforms being implemented in the country have become an

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important task. In the conditions of the modern labor market, the content of education is constantly changing, which requires the organization of the educational process based on the principles of flexibility. In this regard, the organization of the educational process in pedagogical higher education based on the cluster approach ensures the integration of interdisciplinary and educational sectors, and serves to develop the creative and professional competencies of students. The concept of "cluster" initially appeared in the fields of economics and technology, and today it is widely used in the education system of developed countries.

In the process of pedagogical reforms being carried out in Uzbekistan, special attention is paid to strengthening interdisciplinary integration. In particular, the Concept for the Development of the Higher Education System until 2030, approved by the Decree of the President of the Republic of Uzbekistan No. PF-5847 dated October 8, 2019, sets the task of directing scientific and research work to innovative solutions to existing problems in socio-economic spheres, to a wide study of problems at the intersection of disciplines. Also, the need to ensure interdisciplinary integration in order to achieve modern personnel competitiveness and educational efficiency is increasing day by day.

This article analyzes the issue of integrating interdisciplinary and educational sectors in artistic (fine arts) education using the example of cluster methodology. The concept of integration in the field of education is considered as a complex process aimed at ensuring coherence and continuity by combining various disciplines and educational sectors towards a single goal. As a result of integration, previously separate knowledge and elements can be combined, forming a single integrated system and acquiring new qualities (Nazarov, Rizaeva & Juraev, 2014). The cluster approach is aimed at ensuring such integral integration, and is a methodology that unites various organizations (educational institutions, scientific centers, production enterprises, etc.) in a certain region or field on a single platform. The following sections analyze the experiences of developing interdisciplinary and interactive cooperation in fine arts education and highlight the advantages of this process within the framework of the cluster model.

The analysis of scientific literature shows that the issue of integrating various specialized disciplines with other disciplines has been the focus of many researchers. For example, M.G. Sokolova and I.A. Bombina (2013) emphasize

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that the content of teaching methods is constantly updated due to the requirements of the modern labor market, and note the importance of unity based on the principles of flexibility of educational subjects in achieving quality and efficiency in the education system. In their opinion, such changes occur due to the integration and differentiation of disciplines, therefore, it is necessary to form a cooperation mechanism using the cluster approach to ensure inter-disciplinary coherence and continuity. Cooperation in the form of a cluster is a mechanism that integrates the scientific and program resources of separate subjects with equal rights, serves to eliminate the gaps between the education, science and production sectors and meet the need to train competitive pedagogical personnel.

Research in the field of professional education also confirms the integrative value of the cluster approach. S.V. Sinisyna and N.I. Zyryanova, speaking about the importance of organizing vocational education on a cluster basis, first of all indicate the need to improve its regulatory and legal framework. Scientists recognize the development of a system of cooperation between educational institutions and industrial enterprises as a regional socio-economic value and emphasize the great pedagogical importance of the cluster approach in linking the educational process with practice. S.V. Danilov and M.I. Lukyanova, in their study on the role of the cluster approach in the formation of innovative systems in the field of education, analyze that the use of clusters is one of the main factors in the formation of innovative educational systems.

Studying foreign experience in integrating science and education sectors in the educational process and introducing it into the national education system is a very urgent task. Another foreign researcher, S.M. Lemesheva, in her work on the effective use of new pedagogical technologies in fine arts lessons, noted that the fine arts education system can be made more effective by integrating research and educational activities. She noted that the use of research methods and technologies helps to develop critical thinking in students, and also serves to improve creative skills and qualifications. Ye.N. Nadezhdin also showed that interdisciplinary knowledge can be used as a didactic resource to improve the professional training of specialists, proving that integration serves to improve educational technologies and improve the quality of teaching. Thus, many scientists emphasize the possibility of integrating interdisciplinary research and educational networks in the education system on a cluster basis, recognizing that

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this approach creates synergy between different organizations, which ultimately leads to more efficient use of resources and an increase in the quality of education. The advantages of interdisciplinary and interdisciplinary integration are even more clearly demonstrated in the example of fine arts education. N.A. Stebleskaya notes that teaching fine arts in conjunction with other disciplines such as history, geography, literature, music has a positive effect on the creative potential of students. At the same time, the use of various pedagogical technologies such as design, information technologies, modeling in fine arts lessons helps to more fully reveal integrated topics. An interdisciplinary approach creates the basis for a deeper understanding of art and its place in society. For example, Ye.N. Nadezhdin believes that by integrating psychology, it is possible to deeply study psychological processes such as perception and creativity in fine arts. A.V. Karpov notes that it is useful to study the religion, customs and traditions of different peoples through works of art in cooperation with anthropology in teaching the history of fine arts. Similarly, philosophy can help analyze artistic concepts such as beauty and virtue, while history can help study important historical periods of art such as the Renaissance and Baroque. Knowledge of cultural studies (museology, theater, music history, etc.) is also necessary in the professional activities of a visual arts specialist, which helps to understand art in a broad cultural context. Thus, by integrating various disciplines in art education, students develop the ability to comprehensively understand and analyze artistic phenomena.

Ensuring the continuity of school and higher education in the educational process also increases the effectiveness of art education. A.B. Viflemsky and V.A. Malinin, in their research on the integration of school and university, showed that the creation of a continuous education system contributes to the integrated development of fine arts teaching and research. They noted that the integration of school and higher education institutions forms a continuous system covering all stages of the educational process, increasing the effectiveness of fine arts education and research. O.N. Shelegina also recognizes in her research that the integration of scientific research and the educational process provides the basis for creating a single system covering all levels of education and scientific activity in the field of fine arts. From the point of view of modern requirements, V.A. Dalinger, N.A. Moiseeva and T.A. Polyakovs noted that in accordance with the new generation of educational standards, university graduates are required to be

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able to think creatively and critically, to be inclined to constantly work on themselves, and to create innovative products. So, today, in the training of specialists, special attention should be paid not only to knowledge in a narrow field, but also to the development of life skills and creativity. For this purpose, the development of the necessary disciplines and sectors together, that is, the establishment of cluster cooperation between educational institutions, scientific centers, production and other partner organizations, is of great importance.

The following methods and techniques can be used to develop interdisciplinary research and interdisciplinary cooperation in the education system:

Organization of conferences and seminars: a higher education institution can organize various events such as scientific conferences, seminars, round tables, etc., together with participants in cluster cooperation. At these events, professors, researchers, and students share their scientific achievements and best practices, discuss problems, and exchange ideas. If necessary, such dialogues can also be held online, creating conditions for international exchange of experience.

Joint scientific projects: universities, together with educational institutions and research centers, can implement joint research projects in areas where different disciplines intersect. Within the framework of such projects and grants, scientists, educators, and students work together, pooling knowledge and skills, and apply innovative approaches to solving complex problems. For example, in the humanities, linguists, historians, computer specialists, and designers can jointly analyze large volumes of text and graphic data to study cultural and historical phenomena in new ways. At the intersection of technology and art, a team of engineers, technologists, and designers can come together to create robotic systems that improve lifestyles or increase student engagement. Such interactive projects create innovative solutions and strengthen connections between science and society.

Interdisciplinary additional courses and programs: educational institutions can develop and implement additional courses and educational programs that integrate knowledge from different fields. For example, it is necessary to organize special courses that seamlessly connect theoretical subjects such as art history and fine art methodology with practical subjects such as drawing, painting, and composition. This will help students gain comprehensive knowledge, develop interdisciplinary thinking, and develop the ability to work in teams with different specialists.

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Cooperation with the community and industry: a higher education institution should establish cooperative relations with its surrounding community, cultural institutions, and industrial enterprises. Through the cluster approach, it is possible to organize events aimed at jointly studying and solving local problems, meaningfully spending youth leisure time, and stimulating interest in art. For example, regional exhibitions, seminars, and creative meetings are held at the university, in which not only students and teachers, but also local artists and representatives of the public participate. As a result of such dialogues, young people are widely involved in creativity and graduates are also helped to find employment.

Creative festivals and exhibitions: in the field of fine arts, it is very important to organize exhibitions and competitions that showcase the creative work of university students and schoolchildren. For example, participation in the traditional "Fine and Applied Arts Festival" held by the Academy of Arts of Uzbekistan creates an opportunity for students to show their creative work to the general public and learn from the experience of others. Also, the active participation of students in organizing the "Kamalak-ART" festival for schoolchildren at the university serves as practical experience for their future professional activities. Participation in such festivals and competitions improves the professional skills of students and also forms organizational skills in them.

Support for students' scientific and creative projects: within the framework of cluster cooperation, students should receive material and moral support in the implementation of their independent scientific research and creative projects. Universities can provide special grants and scholarships for talented students, provide them with experienced scientific supervisors. This will inspire young researchers, increase their confidence in scientific research, and help them deeply understand the practical importance of interdisciplinary integration. As a result, students will effectively launch their creative activities and create a solid foundation for their professional careers.

Platforms for popularizing results: it is important to create special information platforms, electronic libraries, and scientific journals to popularize the results of cooperation between interdisciplinary research and educational networks. For example, online databases or scientific collections are created at universities, where achievements and news of cluster participants are regularly published. These platforms will not only accelerate information exchange, but also

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strengthen cooperation between network participants and create new integration ideas.

The above-mentioned activities show that positive results can be achieved by implementing a cluster approach to the field of fine arts. For example, when different parts of the continuing education system - general education schools, specialized art schools, higher education and research institutions - unite into one cluster system, favorable conditions are created for jointly solving complex problems related to fine arts. Through such cooperation, university professors, teachers and students are involved in scientific research aimed at solving real problems encountered in the field of fine arts in continuing education, in the professional and life activities of a teacher-artist. Students gradually adapt to their chosen professional activity and develop skills in practical problem solving; the tasks set in the research process are directly tested in practice.

The cluster approach also encourages individual creative research of students. It supports their aspirations to find their own personal style, implement innovative ideas. Working with experienced mentors and having the necessary material and technical base will attract students to research and creativity more widely, strengthen their ability to integrate knowledge gained in different disciplines. In addition, as a result of electronic platforms created within the cluster, scientific publications and discussions at conferences, new knowledge and achievements will be made available to the general public, which will serve the development of the entire system. In general, the development of interdisciplinary research and educational networks is an important factor in supporting integration under the cluster approach. This approach will accelerate progress, knowledge exchange and innovation in many areas, allowing students and researchers to receive a more complete and comprehensive education.

In visual arts education, “interdisciplinary integration” refers to the interrelationship of different disciplines, each of which enriches and complements the other, while maintaining its own uniqueness. For example, in the creation of a work of art, knowledge of history, philosophy, and psychology is used in order to understand the historical context, philosophical idea, and psychological impact. Similarly, the implementation of complex projects such as robotics and modeling requires knowledge of technology, computer science, physics, and design; and the application of geometric shapes and proportions in visual composition can be based on the principles of mathematics.

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Transdisciplinarity is a method of expanding the scientific worldview, which involves studying a certain phenomenon within a single holistic system, rather than limiting it to the framework of a traditional discipline. In the visual arts, transdisciplinary integration is understood as a deep and integral integration of specialized disciplines (graphics, painting, sculpture, composition, art history, fine arts methodology, etc.). In the process of artistic creation, the boundaries between disciplines disappear - the artist is simultaneously engaged in both research and creativity, as a result of which a single whole product is created. This form of integration practice is also fully consistent with the principles of the cluster approach.

In the process of visual arts education, not only interdisciplinary, but also intra-disciplinary integration is important. Combining different knowledge and skills within one discipline allows students to master it more deeply. For example,

- Combining styles: students are given exercises such as simultaneously applying graphics and painting methods, applying composition techniques related to sculpture in practical art lessons.
- Combining theory and practice: an example is the theoretical study of the style of a particular period by copying the works of famous artists and applying it in creative work, as well as strengthening the principles of composition in drawing and painting through practical tasks.
- Integration of genres and styles: combining pictorial scenes from different genres (for example, still life, portrait, landscape) in one composition, or using elements of realism and abstractionism in one painting together enriches the expression of fine arts.
- Project-based learning: creating creative projects with several stages connected in a row, each stage related to a different subject. For example, tasks such as first copying a famous work in a traditional way, then imitating this style to complete coursework in drawing and painting, and finally creating an independent creative composition based on the accumulated experience increase the effectiveness of education.

Forms of an integrated approach in education can be divided into vertical and horizontal types. Vertical integration is the repeated study of the same topic at different stages of the educational process with an increased level of complexity; horizontal integration is the simultaneous teaching of materials that are similar in content in different academic disciplines. In the process of integrated lessons, the

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following competencies of students are developed: thinking (understanding the purpose and essence of the topic being studied), general cultural (familiarization with historical information on the topic), information (working on a computer, being able to independently find the necessary material) and communicative (working in a team, listening, communicating and accepting other points of view) skills. Integrated education also develops students' creative thinking, increases their educational and cognitive activity, and helps to systematize and optimize knowledge and skills.

Thus, the cluster approach, which has been proven effective in many areas, serves as an important factor in strengthening interdisciplinary research and integration of educational sectors in fine arts education. This innovative approach creates a basis for establishing cooperation between various organizations, exchanging knowledge and experience, and implementing new ideas into practice. As a result, a richer and more comprehensive educational environment is formed for students and researchers, which is also fully consistent with the spirit of pedagogical reforms in our country.

Conclusion

The cluster approach in fine arts education is an effective method that serves to stimulate cooperation between scientific sectors and various specialties, to ensure coherence and continuity in the educational process. The research conducted confirms that interdisciplinary integration has a positive effect on the development of professional and creative skills of specialists in various fields and the effectiveness of scientific and research activities.

In order to strengthen interdisciplinary research and the integration of educational networks in art education, it is advisable to use various pedagogical technologies and methods. In particular, the widespread introduction of project technologies, ICT tools and interactive methods into the educational process within the framework of an integrated approach serves to reveal the creative abilities of students, develop their critical thinking and professional competencies. The system of continuous education and research formed on the basis of interdisciplinary integration is stable and effective, and creates the basis for innovative development. Therefore, in accordance with the reforms being carried out in the field of education, the widespread implementation of cluster methodology in art education and the development of a culture of

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interdisciplinary communication should be recognized as one of the priority areas of modern pedagogy.

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