

The Cluster System of Art-Pedagogical Tools in Higher Pedagogical Education and Its Role in The Formation of Creative Competence

Yusupova Firuza Xajiboy qizi

Instructor at Urgench State Pedagogical Institute, Uzbekistan

Received: 30 October 2025; **Accepted:** 26 November 2025; **Published:** 31 December 2025

Abstract: This article discusses the issues of implementing art-pedagogical tools in the system of higher pedagogical education based on a cluster approach. The role of integrating art and pedagogy in developing the creative competence of future teachers, as well as the components of the cluster system and its effectiveness, are analyzed.

Keywords: Art-pedagogics, cluster system, creative competence, higher pedagogical education, integration, innovative approach.

Introduction: Today, modernizing the higher education system on a global scale—particularly fundamentally improving the quality of future pedagogical personnel training—stands as one of the highest priorities. Alongside being an era of information and technology, the 21st century is a period where human capital and its intellectual-creative potential have taken center stage. The new generation of learners entering contemporary general secondary schools (Generations Z and Alpha) possesses entirely distinct characteristics in terms of information perception, cognitive processing, and world comprehension. This, in turn, imposes a strict demand on higher pedagogical educational institutions to train "pedagogical innovators" who can not only teach based on standard curricula but also devise non-standard, creative, and flexible solutions in any pedagogical scenario.

In the Republic of Uzbekistan, wide-ranging reforms are being implemented to overhaul the education system, specifically to elevate the quality of pedagogical education. Updating educational content in higher pedagogical education and developing students' creativity subjectivity alongside their professional competencies is one of the strategic goals of state policy. This is because only a creatively thinking teacher

can foster an imaginative environment within the educational process and instill a deep affection for the subject in the hearts of the younger generation.

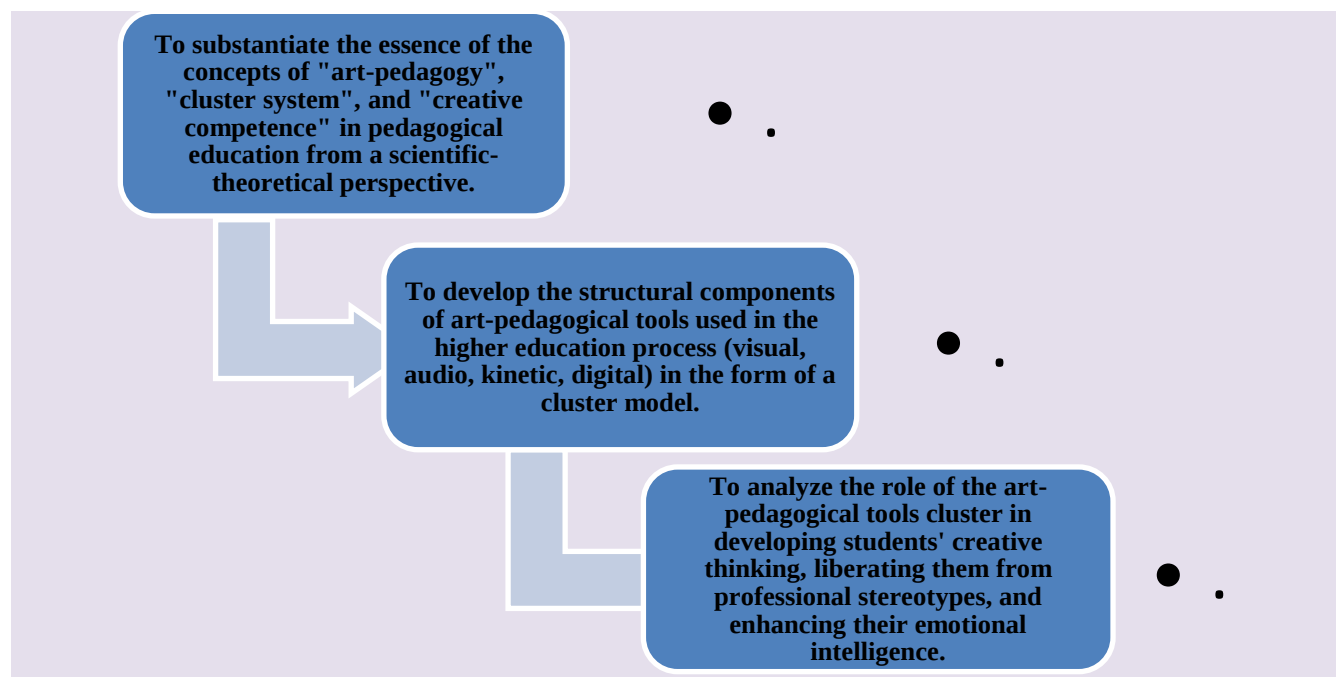
However, in current higher pedagogical educational practice, specific gaps remain visible in systematically developing the creative abilities and creative competence of future teachers. In many instances, the learning process is confined to mastering dry theoretical knowledge and completing tasks of a reproductive nature (memorization and reiteration). Students fail to sufficiently develop emotional intelligence, aesthetic taste, empathy, and skills for creative problem-solving in their professional field. As an interdisciplinary field that leverages the immense educational and developmental power of art, art-pedagogy holds vast potential for resolving this issue. Nonetheless, the scattered, episodic, and unsystematic use of art-pedagogical tools in lessons does not yield the expected efficiency. Consequently, a critical necessity has emerged to integrate art-pedagogical tools into the educational process as an integrated mechanism—based on a cluster-based system.[1]

The primary objective of this research is to systematize art-pedagogical tools in the higher pedagogical education system based on a cluster approach, as well

as to reveal the pedagogical potential and methodological foundations of this system in shaping the creative competence of future teachers.

To achieve this objective, the following tasks have been defined: To analyze the role of the art-pedagogical

tools cluster in developing students' creative thinking, liberating them from professional stereotypes, and enhancing their emotional intelligence.



LITERATURE REVIEW

The cluster system of art-pedagogical tools transforms students into active subjects of the educational process, while simultaneously generating an innovative environment that ensures the mutual integration of personal and professional creativity.

The issues of developing the creative competence of future teachers and systematically implementing art-pedagogical tools into the educational process have been at the center of attention of global and domestic pedagogical-psychological research for many years. In order to properly comprehend the scientific foundations of this problem, it is necessary to group and analyze the literature across three primary directions:

In studying the nature of creativity and inventiveness in pedagogical activity, J. Guilford and E. Torrance laid the fundamental foundation in Western psychology. They evaluated creativity as divergent thinking (the ability to find multi-variant solutions to a problem) and the capacity to transcend traditional stereotypes.

In the Russian scientific school, scholars such as V.A. Slavenin, M.M. Potashnik, and specifically N.M. Kashapov within the field of professional creativity,

considered the creative competence of a teacher's personality to be the core of their professional mastery.[2]

Among Uzbek scholars, the research of R.X. Djurayev, Sh.S. Shodmonova, and in particular, B.X. Xodjayev and Sh.Sh. Olimov, methodologically reveals the issues of preparing future teachers for innovative activities and systematically forming their creative thinking. They proved that creativity is not merely an innate talent, but a professional competence that develops within a purposefully organized educational environment.

Although the concept of "art-pedagogy" and its methodology initially formed at the intersection of art and psychotherapy (A. Hill, M. Naumburg), it later evolved into a purely pedagogical concept. Russian researcher E.A. Medvedeva defines art-pedagogy as the science of creative development and socialization of the individual through the tools of art. N.Y. Seryogina, on the other hand, specially emphasizes the role of artistic-creative activity in training future pedagogues.

Content. Shaping the creative competence of future teachers in higher pedagogical education requires a specific pedagogical environment and systematic tools. Unlike traditional educational methods, the cluster

system of art-pedagogical tools developed within the framework of our research aims to simultaneously activate the student's emotional, intellectual, and practical-professional potential.

By a cluster system, we mean the interconnected chaining of the pedagogical functions of various art forms toward a specific goal. In the process of higher pedagogical education, this cluster consists of the integration of the following four primary blocks (modules): Visual-projective block: This block develops students' skills to visualize abstract plans and express lesson topics through illustrative and creative symbols. For instance, students depict complex concepts in the science of pedagogy using "Collage" or "Mind mapping" methods by applying artistic elements. Audio-artistic block: This module enhances the future teacher's speech culture, rhetorical abilities, and skill in managing the acoustic-psychological environment in the classroom. Through fairy-tale therapy, students learn to find metaphorical solutions to problematic pedagogical situations. Kinetic-interactive block: This block develops non-verbal means of communication (gestures, facial expressions, pantomime), which are paramount for a teacher. With the help of theater pedagogy, students dramatize lesson scenarios, which helps them overcome the fear of public speaking. Digital-creative block: In the modern information environment, it is impossible to imagine art-pedagogy without digital technologies. Students create audio-visual installations, animated presentations, and electronic didactical games for lessons.[3]

The mechanism of forming creative competence through the cluster system The cluster system systematically "awakens" creativity within the student's personality across several stages. This mechanism operates based on the following linear chain:

Overcoming psychological barriers: Many students entering higher education possess stereotypes such as "I am not creative" or "I am afraid of making mistakes." Art-therapy and musical tools within the cluster release students from the fear of evaluation and liberate their inner "Self." Activating divergent thinking (Cognitive stage): Students are assigned to solve traditional pedagogical tasks using elements of art. For example, a problem is posed: "How can a homeroom lesson be organized through a theater and music cluster?" As a

result, the student begins searching for dozens of original solutions to a single problem. Forming professional-creative reflection (Practical stage): The ultimate endpoint of the cluster system is the student's personal pedagogical product (a creative lesson project, an original fairy tale, or a game-based technology). The student tests and analyzes their creative product within the group.

Pedagogical conditions for the effectiveness of the cluster system

The cluster of art-pedagogical tools does not yield results spontaneously in the higher education process. For this to occur, the following pedagogical conditions must be ensured:

Interdisciplinary integration: Art-pedagogical methods should be applied as auxiliary tools not only in culture and art disciplines, but also during lectures in "General Pedagogy", "Psychology", "Educational Technologies", as well as specialized subjects (mathematics, linguistics, chemistry, etc.).

Creative educational environment: Any original idea from a student must not be rejected in the classroom; on the contrary, it must be supported based on the principles of brainstorming and free communication.[4]

Art-pedagogical training of the teacher: The professors and instructors themselves must possess methodical mastery in applying these cluster-based tools.

RESULTS

Transition from the "Knowledgeable Teacher" model to the "Creative Facilitator" model

In traditional pedagogy, the student was a subject who received knowledge in a ready-made form. The cluster system (the integration of music, theater, and visual arts) has shifted the educational process to the principle of facilitation (assisting in bringing out the student's internal potential). The results show that art-pedagogical tools developed students' skills to manage the lesson through play and art without putting pressure on the learner's personality. This establishes subject-subject relationships (equal dialogue between the teacher and the student) in pedagogy.

When a student encounters art tools in a lesson, their emotional response toward the learning material (emotional intelligence) is activated. From a pedagogical perspective, knowledge and skills

perceived through emotion are retained in memory for a long time and are easily transferred into practice. The high growth rate in the experimental group (35%) is explained precisely by this didactical law.

When entering the educational system, future teachers are often inclined to repeat the rigid, conservative teacher models (templates) from their school days. The art-pedagogical cluster (for example, dramatization of problematic situations or fairy-tale therapy) breaks these stereotypes. In pedagogical language, this is called "pedagogical deblocking." The student acquires creative boldness, becoming unafraid of making mistakes and capable of working with any non-standard group.

The success of the cluster system is not merely the sum of art forms, but their pedagogical convergence (merging). While drawing, the student thinks about the visual map of the lesson; while performing a role, they work on the teacher's speech technique and the lesson scenario. This process forms an integrated pedagogical worldview in the student's thinking. They begin to look at the lesson not as a dry plan, but as a complete work of art.

Reliability of the obtained results. To evaluate the creative competence of students in the research, instead of randomized criteria, highly reliable standardized methodologies recognized in world psychology and pedagogy were utilized. In particular: E. Torrance's creativity test (figural and verbal forms) was applied to determine the divergent and creative thinking of students.

In evaluating professional creativity, pedagogical problematic situations and case-study methods were used, and their evaluation criteria were approved by expert specialists.

The groups selected for the experimental-testing work (control and experimental groups) were ensured to be in mutually equal and comparable conditions. Students from the same educational direction, with almost equal academic performance indicators, and whose creativity levels were close to each other (around 10%) in the initial baseline monitoring, were involved in the groups. The total number of participants constituted a sufficient volume to reduce statistical errors and generalize the results.

The reliability and non-accidental nature of the

obtained results were re-verified using mathematical-statistical methods. To determine the significance level of the difference between the indicators of the experimental and control groups at the beginning and end of the lessons, Student's t -criterion (Student's t -test) and Pearson's criterion of fit (χ^2 - chi-squared) formulas were used.

Mathematical analyses showed that the growth of the experimental group students' indicators at the end of the lessons does not possess an accidental character, but is the result of a clear, purposeful pedagogical influence—namely, the application of the art-pedagogical tools cluster (at a reliability level of $p < 0.05$).

The developed methodology and cluster system were implemented into the real educational process (lectures and seminar sessions) of higher education institutions. The content of the research and the obtained results were discussed in departmental scientific seminars, as well as scientific-practical conferences at national and international levels, and were positively evaluated by pedagogue-scholars and experts.

CONCLUSION

In conclusion, the cluster system of art-pedagogical tools is an effective innovative mechanism that elevates the quality of higher pedagogical education to a new stage and forms the personality of a creative teacher capable of making correct and non-standard decisions in any pedagogical situation for our schools.

Recommendations. Based on the results of the research, the following practical recommendations are put forward to further improve the higher pedagogical education system:

To introduce special courses named "Art-Pedagogy and Creativity in Education" into the curricula for students of the pedagogy direction;

To enhance the methodical mastery of higher education professors and instructors in using art-pedagogical tools and cluster technologies (organizing seminar-trainings);

To establish the activities of innovative art-laboratories in universities that test students' digital and artistic creativity.

REFERENCES

1. Khodjayev B.Kh. Developing Professional-Pedagogical Creativity of Future Teachers in the Process of Higher Pedagogical Education. – Tashkent: Fan va Texnologiyalar, 2014. – 204 p.
2. Mukhamedov G.I., Khodiyev B.S. Innovative Cluster of Pedagogical Education: Theory and Practice. – Tashkent: Innovatsiya-Ziyo, 2020. – 280 p.
3. Bulatov S.S., Ashurova G.A. Art-Pedagogy and Art-Therapy in Artistic Education: Methodological Manual. – Tashkent: Cho'lpon, 2019. – 160 p.
4. Shodmonova Sh.S. Formation and Development of Independent and Creative Thinking of Higher Education Institution Students: Doctoral Dissertation in Pedagogical Sciences. – Tashkent, 2010. – 312 p.
5. Djurayev R.Kh., Olimov Sh.Sh. Innovative Technologies and Pedagogical Creativity in the Education System. – Tashkent: Voris-Nashriyot, 2017. – 192 p.
6. Torrance, E. P. Guiding Creative Talent. – Englewood Cliffs, NJ: Prentice-Hall, 1962. – 278 p.