PEDAGOGICAL AND PSYCHOLOGICAL BASIS OF THE DEVELOPMENT OF GRAPHIC EDUCATION IN INSTITUTIONS OF HIGHER EDUCATION

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Abstract: this article presents pedagogical and psychological foundations, solutions and suggestions for the development of graphic education in higher education institutions. In addition, it is about the method of acquiring knowledge that future specialists need to acquire.

Key words: graphics, psychological, graphic education, memory, analogical, standard, geometry.

It is known that people differ from each other in many ways. For example, some people can remember what they have seen very well and can remember it clearly at the right time. Some have the ability to describe any object they see in detail. Others think more clearly about what they hear, someone can express their feelings in a simple, fluent language, while others are based on fantasies of various content and form. The field of drawing is no exception, that is, some people tend to add elements of fantasy to each drawing. Therefore, people's impressions of the external world and their abilities to organize them in the mind are different. On the other hand, there are professions that allow one or another quality in a person to be perfected. For example, an operator working in large automatic control systems learns to pay attention to any small changes, while a designer becomes a master of abstract mathematical calculations. Therefore, a person's ability to reflect the features and characteristics of the external world in his mind depends on the growth of his talent and the development of professional skills. That is why we will dwell on the role of cognitive processes - perception, intuition, memory, attention, thinking, imagination, will and emotions - in human life and professional growth, which are important forms of reflection of the mind.

These processes are very close and familiar to man. Because each of us knows that we have a mind, some separate and integral properties of the things and events around us. We also know that these things and events cause special emotional reactions in each of us. For example, from a book the person who gets information about the drawing does not ask others if he is actually reading this book. Such things happen by themselves as natural processes. Only during the exam, you are more interested in why you can't remember the material that you studied the night before in front of the teacher, and you come to the conclusion that "I need to work on my memory."

In fact, cognitive processes are also controlled processes in a certain sense, and if you want to expand your capabilities or increase your level of talent, you need to learn certain rules and characteristics of these processes.

At first glance, the human mind is a whole thing, but in fact it consists of some separate processes. These processes are sensations, perception, memory, attention, thinking, speech, imagination, skills, etc. These processes are so interconnected that it is difficult to imagine one without the other. For example, try not to think about what you are seeing, do you know its essence? You will remember the drawings you have

carefully seen or read. Or, to think about something like geometrical problems, we need both previous perceptual images, and our memory skills, and our inner speech, willpower, and attention at the same time. Even if we accidentally get a problem of drawing geometry, our reaction, in addition to emotions, causes a series of thought processes, such as how those things appeared here. All these are phenomena related to psychological operations and processes. That is why they are regularly investigated as a problem in both pedagogy and psychology.

After the advent of advanced computer technology, people's interest in their mental processes increased. Now we talk a lot about receiving information (similar to a process called traditional perception), reapplying it (similar to thinking), and storing it (memory). But this raises the question of the importance and upbringing of natural living processes in man.

An analogous situation often occurs in our memory. When we come across a question related to science, we think: where did I see it? You may not remember, but the structure of the problem, the principle of operation and other aspects are familiar. It should also be explained that what a person has seen and experienced is actually stored in the brain due to exercises, we can release only some of them into the field of consciousness. Only when we are sick or worried about something, all kinds of thoughts come to our mind. Those are involuntary restorations of things that actually exist.

Involuntarily, it was observed in the experiments that, paying attention to mental processes when teaching drawing to students, they kept more of what they saw in their memory. Therefore, during the lessons, they are shown visual aids related to the topics. In this regard, we have enough information that achievements are highly effective.

The lack of drawing specialists in higher educational institutions and the fact that among the specialists they teach drawing after graduating from other fields have some effect on the students' mastery.

The main reason why the information in the mind is actually less than in our brain is that a person sorts and selectively accepts any information, he does not pay attention to what he considers "unimportant" and does not remember. He processes and changes all available information in his mind in his own way. That is why it is said that every person is unique and irrevocable, individual.

Currently, higher education institutions have high demands for education in drawing. Extensive work is being done to implement the requirements. The emerging specialists, of course, the development of the state, the development of science and technology, the development of science, and the preparation of personnel who will be the foundation for the new generation, remain the demand of the time. Based on this, we face the following problems in training personnel.

As a result of our observations, it is clear that in the teaching of drawing science, the mastery rate of students is decreasing. For example, some theoretical knowledge and graphic skills included in the content of graphic education at school is formed in the drawing course. Therefore, in the process of studying at higher educational institutions, students have some level of knowledge in this subject. When they study geometry at school, the ground is formed for the science of drawing. However, the ratio of mastered knowledge is lower than that of drawing knowledge. Therefore, 30% of them, and 60% of some of them, show that their spatial imagination is not formed. This remains an urgent problem for drawing science. Because, as a result of the negative consequences of this, the lack of development of spatial imagination in students, which is the main foundation of the science of drawing, is the reason for not producing excellent personnel in the field. The essence and basis of this science can be mastered and understood only by persons with developed and developed spatial concepts. This can be caused by the following psychological, pedagogical and methodical aspects, namely:

- causing difficulty in the student's acceptance or lack of understanding of the subject;

- the information in the description of the new topic is familiar to the student and is repetitive, that is, it does not arouse any interest;

- lack of spatial imagination;

- incomplete understanding of the subject;

- lack of spatial imagination in topics that require imagination;

- in the course of the lesson, the teacher awakens the interests of the student to a certain extent and does not perform independent work, homework, graphic work related to its formation and development;

- the student does not consolidate the knowledge gained with the increase of his interest in graphic education;

- students who are interested in graphic education do not seek to expand, grow, improve, develop it;

- keeping students busy with other activities during the lesson and not paying attention, etc. Such situations are rare in the work of experienced teachers, but they do happen.

In higher education, the topics covered in school are taught in a broad and complicated manner. Therefore, this subject allows students to be interested in graphic education. In the traditional educational process, the teacher organizes the lesson in a way that is suitable for students with low learning ability. In this case, it is observed that the presentation of the subject becomes boring to the excellent students in the classroom and weakens their interest, and on the contrary, it is observed that the students who are difficult to master are lagging behind in the educational process even if they want to. Because the difference between the students' learning indicators does not allow the learning process to be activated. Such a process can be observed even in spatial imagination among students. Because the interest in graphic education among students is low, moderate, oriented to formation, different in the educational process, which creates problems for the teacher. Therefore, the development of spatial imagination in students should be researched as both a pedagogical and a psychological problem.

In the process of teaching graphic education to students of different levels of drawing, if the teacher organizes the lesson taking into account the acquisition of students with undeveloped and low-level interest in graphic education, students with no interest in graphic education will become disinterested and bored in the lesson. wakes up. If the teacher does the opposite, students with a low level of interest in graphic education will lose their mastery. In this regard, it is required to develop factors that encourage students to be interested in graphic education based on their psychological characteristics.

In psychology, the concept of imagination is the reflection and embodiment of a perceived object or event in a person's mind. The purpose of these subjects' interest in graphic education was to limit the knowledge of the subject to paper only, in which students would need tons of paper and teaching materials. Due to the fact that such a complex process occurs in the integral relationship between the giver and the recipient of knowledge, it is very difficult to write down the situations between them on paper. Therefore, it will be possible to strengthen and master knowledge through interest in graphic education. The teacher conveys his knowledge to students through educational tools and activates a productive lesson with the help of factors that encourage interest in graphic education. Students acquire knowledge with the help of these tools and, in turn, try to form and develop the given information in their imaginations through their interest in graphic education. In the drawing lesson, for example, views, a clear image, determining its 6 views based on a clear image, building a third view based on two views, drawing a clear image based on the views, or cutting planes in cutting and sectioning (imaginally) implementation in detail is carried out directly based on the students' imaginations. Interest in graphic education plays a big role in this. That is why the interest in graphic education is considered as a big problem of psychological and pedagogical significance in the educational process of the student. This is an important factor in the development of students' interest in graphic education in solving an important psychological and pedagogical problem. The rational use of interest in graphic education is an effective means of solving this problem.

The study of these problems in the educational system, the factors that have a negative effect on the activation of the educational process in the above order have been somewhat illuminated in the research works of psychologists and pedagogues. They emphasize that the introduction of new methods and methodological tools in the field of education will lead to further improvement of the educational process in the future. The application of methodological tools, in particular, the development of interest in graphic education in the process of teaching students of higher education institutions based on their interest in graphic education, gives several positive results.

The lesson process is the mental activity of the student, that is, the activity of thinking. To do this, it is necessary to set problematic tasks for students, as a result, to teach them to sharpen their mental activity and strive. In normal lessons, the teacher devotes most of his time to the presentation of a new topic. As a result, in many cases, they do not have time to strengthen the previous topic, its connection with the new one and, most importantly, to evaluate their knowledge. Unfortunately, many of our pedagogues believe that the organization of the lesson process is only the transfer of new knowledge, and they treat the activity of students and the development of their intellectual potential as a secondary issue. As a result, the student gets bored with the current subject and has to wait for the call.

There are a number of ways to overcome such problems, including enriching the lesson content with interesting factual and historical materials, including rational use of interests in graphic education. For this, it is necessary to develop students' interest in graphic education, use methods from non-traditional education, and naturally develop its content and methodology. This is a very important pedagogical problem. After all, the materials in educational programs not only develop the student's individual work characteristics, interest in graphic education, but also serve to bring them to the main place in their activities.

A sequence of interesting information on topics, educational test programs for self-control, software didactic games designed to facilitate learning and interesting understanding encourage students to engage in individual activities. Even under the necessary conditions, it is possible to organize an educational activity without a teacher, and its negative effects may not be felt.

At the right time, it is worth noting that high efficiency in teaching is achieved due to students' interest in graphic education in drawing education, development of spatial imagination, improvement of their educational activities, that is, the learning process is accelerated.

The level of comprehensibility of the educational material, its reflection in the mind and the formation of knowledge based on this information is determined by the principle of instruction. It improves the quality of the teaching process and facilitates students' learning. Because from the psychological point of view, in this process, as a result of the active functioning of all the student's sensory analyzers, the scientific knowledge about things is reflected and stored in the memory. The formation of this or that event, historical memory in the brain, firstly, psychologically increases the level of the student's inclination to learn, and secondly, the result expected from it (education) is pedagogically guaranteed. After a long time, it is observed that the same image, that is, an architectural drawing, a photo exhibition, awakens the information in his memory. However, it can be seen that instructional tools in traditional educational processes are not in demand in many higher educational institutions.

Also, teachers and students expressed their positive opinion about the need to provide the educational process with technical means.

In the course of the study, we can observe the following features in them based on the fact that mazuli are conveyed to students through their interest in graphic education:

- existing knowledge acquired from drawing is stored in the student's memory for a long time;
- student's individual activity develops;
- self-control becomes possible;

- teaches self-assessment and independent thinking;
- student's knowledge and attention regarding interests in graphic education are formed;
- ideas of nationality are formed in students and educate them in the spirit of patriotism;
- forms a sense of appreciation and pride in students for their interest in graphic education;
- teaches advanced pedagogues how to use products of interest in graphic education and how to apply them to their work in the future;
- directs students to the development of competitive developments and electronic developments to new experiences in the world through their interest in graphic education;
- develops students' knowledge of drawing on the basis of standards;
- stability of attention is ensured;
- students' abilities are formed and abilities are developed;
- the student develops a spatial perception of projects;
- harmony in students' sensory analyzers is ensured;
- the level of mastery of science among students increases and their attention increases;
- management of activities during the educational process is properly implemented;
- motivates the student to be active during the lesson.
- encourages the student to think during the lesson;

• the student's activity in the practical lesson increases and the skills of independent graphic work are developed;

- the ability to solve problems in graphic works is formed and the ability develops;
- mastery of subjects is formed in students.

A person's ability to think, that is, his thinking, is developed with the help of thinking. These are actions such as comparison, analysis-synthesis, generalization, abstraction, concretization.

Another important aspect of using the tool of interest in graphic education is that it helps the student to fully and clearly imagine the concepts related to the subject or topic, and reflects the elements of the imagination-object and its properties in the human mind.

In conclusion, it can be said that Bevsita drawing classes serve to improve interest in graphic education, to master each subject and to raise the level of development of spatial imagination in students to 100%. Interests in graphic education or parts of them based on drawing, construction plan, history, visual image, facade, interior and other types of appearance, visible-invisible parts, educational programs-exhibition, test, interesting questions, examples and problems compared to the interests of graphic education encourage the student to have a realistic approach to the studied material. The effective and correct use of materials that correspond to the content of the topic presented through the medium of interest in graphic education makes students interested in learning the topic easily, the lesson process is actively organized, and the individual movement of the student accelerates.

This activity is clearly visible in educational processes organized by means of interest in graphic education. A clear example of this is their mutual independence, consideration of their personal views, and their desire to master the art of drawing. Also, its use in class increases efficiency and activates activity.

The following positive situations arise in the course of the lesson organized by means of interest in graphic education:

- memory and attention will increase;
- increases the student's interest in educational materials and drawing geometry;
- communication between the student and the teacher is accelerated;
- the student's spatial imagination develops;
- mutual cooperation in the educational process is established;

- can quickly and objectively assess the level of knowledge of the teacher and the student;
- the teacher can guide the student to do the work independently;
- encourages the acquisition of independent knowledge;
- encourages the use of literature, educational manuals, the Internet, recommendations and electronic textbooks.

In the course of the lesson combined with such opportunities, the student not only learns the subject easily, but also learns to approach the related knowledge and events individually.

References:

1. Mardov, S. X. (2021, November). Modern Electronic Methods of Controlling Students' Knowledge in the Field of Construction Drawing. In " ONLINE-CONFERENCES" PLATFORM (pp. 18-26).

2. Xudoykulovich, M. S., & Saidaxatovna, R. F. (2021). Xasanboy o'g'li NA Evristic teaching technology and its practical application which in theaching of draftsmanship. Middle European Scientific Bulletin, 12, 458-462.

3. Khudoykulovich, M. S. kizi, FZX.(2021). Content of the Science of Architecture Construction and Its Current Status of Teaching. International Journal of Innovative Analyses and Emerging Technology, 1(7), 106-114.

4. Xudoykulovich, M. S., & Qizi, F. Z. H. (2021). Methods of using graphic programs in the field of construction drawing. ACADEMICIA: An International Multidisciplinary Research Journal, 11(10), 1297-1306.

5. Xudoykulovich, M. S. (2021, October). The status of teaching the subject" construction drawing" in higher education institutions. In Archive of Conferences (pp. 105-108).

6. Mardov, S. K., Khasanova, M. N., & Absalomov, E. (2022). Pedagogical and psychological basis of teaching architecture drawing in types of education. In Euro-Asia Conferences (pp. 32-35).

7. Xudoykulovich, M. S. (2021). THE STATUS OF TEACHING THE SUBJECT. In CONSTRUCTION DRAWING" IN HIGHER EDUCATION INSTITUTIONS." Archive of Conferences.

8. Mardov, S. K., & kizi Farxatova, Z. X. (2022, February). The practical significance of design and its types. In Euro-Asia Conferences (pp. 54-57).

9. Мардов, С. (2022). Qurilish chizmachiligi fanini o 'qitishda grafik dasturlardan foydalanishda talabalarning fazoviy tasavvurini rivojlantirishning bugungi holati va muammolari. Общество и инновации, 3(1), 155-163.

10. Mardov, S. X. (2021). The practical importance of graphic programs and their descriptions in the development of student space imagination in teaching the subject of construction drawing. ISJ Theoretical & Applied Science, 12(104), 680-684.

11. Mardov, S. K., & kizi Farxatova, Z. X. (2022, March). Design and art. In Euro-Asia Conferences (pp. 58-61).

12. Mardov, S. K. (2022). kizi Farxatova, Zilolaxon Xikmat. Methodology of Development on the basis of Graphic Programs in Increasing Student Space Imagination and Graphic Literacy in Teaching Construction Drawing. European journal of innovation in nonformal education, 2(2), 312-319.

13. Xudoykulovich, M. S. (2022). CURRENT STATUS AND PROBLEMS OF STUDENTS'SPATIAL IMAGINATION DEVELOPMENT WHEN USING GRAPHIC PROGRAMS IN TEACHING THE SCIENCE OF CONSTRUCTION DRAWING. Berlin Studies Transnational Journal of Science and Humanities, 2(1.5 Pedagogical sciences).

14. Mardov, S. X. (2021). Current Status of Developing Students' Space Imagination in the Use of Graphic Software in Teaching Architectural Drawings,". International Journal of Advanced Research in Science, Engineering and Technology, 8(10).

15. Mardov, S. K. kizi Farxatova, ZX (2022, February). THE PRACTICAL SIGNIFICANCE OF DESIGN AND ITS TYPES. In Euro-Asia Conferences (pp. 54-57).

16. Mardov, S., Hamroqulova, M., & Nurmatov, E. (2022). Qurilish chizmachiligi fanini o "qitishda talabalar fazoviy tasavvurini grafik dasturlar asosida rivojlantirish metodikasini takomillashtirish. Жамият ва инновациялар, 3 (1), 180–190.

17. Mardov, S. (2022). Qurilish chizmachiligi fanini o 'qitishda grafik dasturlardan foydalanishda talabalarning fazoviy tasavvurini rivojlantirishning bugungi holati va muammolari. Жамият ва инновациялар, 3(1), 155-163.

18. Mardov, S. K., & kizi Farxatova, Z. X. (2022). DESIGN AND ART. Euro-Asia Conferences, 58–61.

19. Mardov, S. K., Khasanova, M. N., & Absalomov, E. (2022). PEDAGOGICAL AND PSYCHOLOGICAL BASIS OF TEACHING ARCHITECTURE DRAWING IN TYPES OF EDUCATION. Euro-Asia Conferences, 32–35.

20. Mardov, S. K. kizi Farxatova. Zilolaxon Xikmat.

21. Valiyev, A. N., Mardov, S. X., & Barkasheva, B. O 'QUVCHILARDA CHIZMANI O 'QISH KO 'NIKMASINI RIVOJLANTIRISHDA MAQBUL USULLARDAN FOYDALANISH. ИННОВАЦИОН ФАН-ТАЪЛИМ ТИЗИМИНИ РИВОЖЛАНТИРИШНИНГ БАРКАМОЛ АВЛОДНИ ВОЯГА ЕТКАЗИШДАГИ РОЛИ ВА АХАМИЯТИ, 226.

22. Valiyev, A. N., Mardov, S. X., & Ramazonova, G. O 'QUVCHILARNING FAZOVIY TASAVVURINI RIVOJLANTIRISHDA DIDAKTIK O 'YIN TEXNOLOGIYASINING AMALIY АНАМІҮАТІ. ИННОВАЦИОН ФАН-ТАЪЛИМ ТИЗИМИНИ РИВОЖЛАНТИРИШНИНГ БАРКАМОЛ АВЛОДНИ ВОЯГА ЕТКАЗИШДАГИ РОЛИ ВА АХАМИЯТИ, 223.

23. Мардов, С. (2023). Pedagogical description of the development of creativity and spatial imagination of the students of the subject "Construction drawing" using graphic programs. Современные тенденции инновационного развития науки и образования в глобальном мире, 1(3), 329–334. https://doi.org/10.47689/STARS.university-pp329-334

24. Mardov, S. X., Xasanova, M. N., & qizi Farxatova, Z. X. (2022). DIZAYN VA SAN'AT. UMUMINSONIY VA MILLIY QADRIYATLAR: TIL, TA'LIM VA MADANIYAT, 1, 35-39.

25. Sanjar, M. (2023). PEDAGOGICAL DESCRIPTION OF THE DEVELOPMENT OF CREATIVITY AND SPATIAL IMAGINATION OF THE STUDENTS OF THE SUBJECT "CONSTRUCTION DRAWING" USING GRAPHIC PROGRAMS. Miasto Przyszłości, 41, 201–205. Retrieved from https://miastoprzyszlosci.com.pl/index.php/mp/article/view/1922

26. Mardov Sanjar. (2023). PROPOSALS AND RECOMMENDATIONS ON THE METHODOLOGY OF USING MODERN GRAPHIC PROGRAMS IN TEACHING THE SCIENCE OF CONSTRUCTION DRAWING. Multidisciplinary Journal of Science and Technology, 3(4), 36–41. Retrieved from <u>http://mjstjournal.com/index.php/mjst/article/view/287</u>

27.Sanjar, M. (2023). PEDAGOGICAL DESCRIPTION OF THE DEVELOPMENT OF CREATIVITY AND SPATIAL IMAGINATION OF THE STUDENTS OF THE SUBJECT "CONSTRUCTION DRAWING" USING GRAPHIC PROGRAMS. Miasto Przyszłości, 41, 201–205. Retrieved from https://miastoprzyszlosci.com.pl/index.php/mp/article/view/1922