

O'QUVCHILARNING BILISH FAOLLIGINI OSHIRISHNING NAZARIY- PSIXOLOGIK ASOSLARINI STEAM ASOSIDA SHAKLLANTIRISH

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Annotatsiya: Mazkur maqolada o'quvchilardagi qobiliyatlarni rivojlantirishda STEAM ta'lim texnologiyasining ahamiyati borasida va o'quvchilarning bilish faolligini oshirishning nazariy-psixologik asoslarini STEAM asosida shakllantirish usullari va samaradorligi haqida fikr yuritiladi.

Kalit so'zlar: STEAM ta'lim texnologiyasi, intellektual qobiliyat, ijodkorlik, fikr, xotira, tasavvur, tasviriy san'at yo'nalishi, nazariya, o'quvchi.

FORMATION OF THEORETICAL-PSYCHOLOGICAL BASIS OF INCREASING STUDENTS' COGNITIVE ACTIVITY ON THE BASIS OF STEAM

Abstract: This article discusses the importance of STEAM educational technology in developing students' abilities and the methods and effectiveness of forming them based on theoretical psychological STEAM to increase students' cognitive activity.

Keywords: STEAM educational technology, intellectual abilities, creativity, thinking, memory, imagination, fine arts direction, theory, student.

Our updated Constitution has been supplemented with special norms regarding youth. That is, a norm has been introduced that states that the state and society shall take care of the formation of loyalty to national and universal values, pride in the rich cultural and spiritual heritage of our people, patriotism and love for the Motherland in children and young people. Chapter XIV, Article 79 of the Constitution of the Republic of Uzbekistan states that "The state ensures the protection of the personal, political, economic, social, cultural, and environmental rights of young people, encourages their active participation in the life of society and the state. The state creates conditions for the intellectual, creative, physical, and moral formation and development of young people, for the realization of their rights to education, health, housing, employment, employment, and recreation." Also, the statement of our Honorable President Sh.

Mirziyoyev “We must always teach our young people to think, think, and live in new ways!” – are clear proof of this.

Research is being conducted in various areas to study, analyze, and apply the results of STEAM educational technology in practice. One of the things that was studied in the preparation of this article is As a result of the analysis of a number of literatures, it can be said that the work on the study of STEAM educational technology is still insufficient. This indicates that there is still work to be done in this direction. During the research, methods such as theoretical analysis and generalization of scientific, theoretical, methodological literature, a number of scientific articles, theses and literature of foreign and Uzbek scientists, psychological and pedagogical observation, comparative and pedagogical analysis were used. In the psychology of abilities specific to the visual arts, a psychological analysis of visual abilities is given. In the process of studying the characteristics of perception in visual activities, V.I. Kirnenko came to the conclusion that the ability in the visual arts is manifested in the perception of phenomena in a holistic and synthetic form, which is the main content of artistic talent. As we know, a child's imagination plays a very important role in childhood. However, how many people think about the need to develop children's creative abilities. Unfortunately, many adults do not pay enough attention to the development of a child's imagination, which significantly limits the possibilities of children in the future. Creativity plays a very important role in the life of every person. Imagination and fantasy help people both in relationships and at work, but most importantly, creative people are able to express their individuality, which helps them succeed in any business. So, even if a child does not suffer from a lack of imagination, parents should pay attention to the development of their creative abilities. General abilities are understood as a person's intellectual abilities. Intelligence is the ability that is responsible for a person's success in mental activity. The following cognitive abilities depend on the general level of intelligence:

- memory
- attention
- thinking ability (the ability to compare, analyze, distinguish the main from the secondary)
- imagination
- representation (for example, the ability to depict a three-dimensional figure on a drawn flat diagram)
- good knowledge of speech.

All people have intellectual abilities, but their level of development varies from low to high. Most people have more specific intellectual abilities (for example, some people can express themselves well, they have a good memory), others have others (for example, abstract-logical thinking, thanks to which a person quickly and correctly solves mathematical problems). If intellectual abilities are responsible for a person's success in life in general and in the field of mental labor in particular, then special abilities are responsible for a person's success in specific activities. For example, special abilities include:

- sports ability
- musical (sense of rhythm, perfect pitch),
- artistic (ability to depict and depict an image in a picture),
- mathematical,
- technical
- and others.

Each person has the ability to perform several types of activities. But the most pronounced, as a rule, are abilities in one or two areas.

RESULTS. To further develop these abilities, it is possible to apply the STEAM educational technology, which has been tested on the basis of international experience and is the most widely used today. STEAM the full name of this abbreviation is as follows: STEAM is S - science, T - technology, E - engineering, A - art and M - math. In English it will be like this: natural sciences, technology, engineering, art and mathematics. Do not forget that these areas are becoming the most popular in the modern world. Therefore, today the STEAM system is developing as one of the main trends. The direction of STEAM education and the use of a practical approach are also based on the integration of all five areas into a single educational system. Schools should identify the abilities of students, taking into account their interests and aspirations. The reason is that whether a student is talented in one subject or not is reflected in the development of his intellectuality from the set of areas of interest to him. In fact, there is no such thing as a person without abilities. An ability can be hidden or undeveloped.

DISCUSSION. The importance of the STEAM project in developing abilities is that this project is a set of natural sciences, in which students can work as a team, In a STEAM educational environment, students acquire theoretical knowledge and immediately learn to use it in practice. That is, it creates a foundation for them to be able to apply the knowledge they have gained in science in practice. Therefore, when they grow up and encounter life problems, they understand that complex issues can

only be solved by relying on knowledge from different fields and working together. Relying on knowledge in only one subject is not enough here. Based on the above information, we can conclude that the main goal of this educational technology is to focus on practical skills, students develop their will, creativity, flexibility and learn to cooperate with others. In it, skills and knowledge constitute the main educational task, that is, this is what the entire education system strives for. It serves as one of the most effective methods today in developing students' abilities. In addition, the project's goal is to create a basis for students to acquire skills in applying theoretical knowledge in practice while mastering subjects. It ensures that lessons are interesting and effective. It helps to identify and develop students' abilities.

The current global educational system requires the development of life skills in learners and the creation of educational content that can train highly qualified specialists by improving their performance.

In order to qualitatively enrich the content of continuing education and increase its effectiveness, new requirements for education include the development of personal qualities such as interest, talent, and ability of learners, as well as the formation of scientific literacy and practical competencies through integrative STEM approaches to natural and technical knowledge in general education[2; p. 192].

The need to improve the functioning of the education system in our country, the need for personnel with 21st century skills, and the conduct of conceptual research on the creation of educational content that can train individuals capable of ensuring the sustainable development of Uzbekistan put on the agenda the issue of raising general secondary education to a new qualitative level, preparing competitive personnel capable of leading sustainable development from national revival to national advancement. In this regard, the creation of curricula, teaching methodologies, and a system for assessing the quality of education, taking into account the requirements of international assessment programs such as PIRLS, TIMSS, and PISA, is pedagogically important.

In our country, STEM education is reflected in research work on directing students to technical creativity. A. Toychiev's research work on the topic of improving technical creativity competencies in students in the field of robotics based on robotics elements explains the pedagogical conditions for developing technical creativity competencies of students of general secondary schools, didactic support for the development of technical creativity competencies of students, criteria for determining the level of development of technical creativity competencies, and a model for developing technical creativity competencies. The research work is of practical importance in

education, as it is aimed at the development of robotics and strengthening the natural and technical components of secondary general education[3; p. 43]. By 2030, China plans to become a leader in the field of artificial intelligence. In this context, it is not surprising that technical and scientific education programs (STEM) are becoming increasingly popular in the country.

REFERENCES:

1. Sh.M. Mirziyoyev. Wise words.
2. S.F. Abdirasilov. Fine art teaching methodology. - T.: "Science and technology", 2012.
3. B.N. Oripov. Basics of fine art. N. 1994 y
4. B. Oripov. Art theory. N. 2010 y
5. Zunnunov A. Theory of pedagogy. Tashkent. Alokachi, 2006.
6. Boydavlatov A. Forming a perfect human personality with the help of pedagogical views of Abu Ali ibn Sina. Education and Development, No. 2. May 11, 2023.
7. Saloxitdinova N.M. "Mutaxassislikka kirish" I qism. O'quv qo'llanma. UOK:37.013 KBK: 74.0 S18 ISBN 978-9910-9606-3-5 "NIF MSH" Toshkent 2023. B.156.
8. Saloxitdinova N.M. "Boshlang'ich ta'limda texnologiya va tabiiy fanlarning o'zaro fanlararo bog'liqligi" Ilm sarchashmalari. Ilmiy-nazariy, metodik jurnal. -9-son. 2023. B.95-98.
9. Saloxitdinova N.M. STEAM yondashuv asosida fanlararo aloqadorlikning metodik asoslari "Pedagogik akmeologiya" xalqaro ilmiy-metodik jurnal (Buxoro davlat pedagogika instituti) №4(6) 2023. ISSN 2181-3787 E-ISSN 2181-3795. B. 141-145.