

THE ESSENCE OF USING PEDAGOGICAL TECHNOLOGIES IN TEACHING STUDENTS TO CRITICAL THINKING

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Abstract: The article describes in detail the essence of the use of pedagogical technologies in teaching students to think critically.

Key word: Modernization, educational technology, renewal, thinking, pedagogy, critical, pedagogical technology, creative, intellectual.

Today, in order to renew and modernize our country, to develop it on an innovative basis, to fulfill the multifaceted and complex tasks that we have set before ourselves, we are modern, creative and critical thinkers, and take responsibility in any situation. We are entrusting important tasks in state and society management to capable, enthusiastic, high intellectual potential, patriotic young personnel[1].

The President of the Republic of Uzbekistan Shavkat Miromonovich Mirziyoyev emphasizes that our country's worthy place among the developed countries and finding solutions to certain problems in society depends on the education of the young generation. For example, if we pay attention to the realization of our children's abilities from childhood and mobilize all our opportunities for their development, more Berunis, Ibn Sinas, and Ulugbeks will grow up in our country. I don't believe it[2]. In his speeches, the leader of our country expresses high confidence in the youth of our country.

One of the most important issues is to further increase scientific potential in higher education institutions, to expand the scope of scientific and scientific-pedagogical personnel training. It is necessary to increase the prestige of higher educational institutions, increase the number of non-state educational institutions, attract highly qualified personnel and strengthen competition. Because the more highly educated and highly qualified specialists there are in our society, the faster and more effective the development will be.

Development of critical thinking in students of higher educational institutions of pedagogy requires great skill, ability and experience from the pedagogue.

The most important thing for professors-teachers is to give thorough knowledge to students and educate them as physically and spiritually mature people. While researching the problem of using pedagogical technologies in the development of students' critical thinking, first of all, we should have enough information about the concepts of pedagogical technology and critical Since pedagogical technologies are a social necessity, they were first used in the 30s of the 20th century in the USA as "educational technology" and represented the use of audiovisual equipment in the educational process. In this case, the term "educational technology" is not only applied to teaching with the help of technical means, but also laid the foundation for a new direction in world pedagogy - pedagogical technology. The founders of

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pedagogical technologies are B. Blum, D. Kratvol, N. Gronlund, J. Carroll, J. Blok, L. Anderson and others.

In the 50s of the 20th century, the use of technical tools in the educational process was recognized as a factor determining the direction of "educational technology", the main focus was on expanding the audience of learners, further improving the capabilities of technical tools, focuses on issues such as expanding their information capacity, quality organization of information transmission service, individualization of education.

In the beginning of the 60s, the organization of the educational process based on educational programming began to be seen as a place that reveals the essence of the concept of "educational technology". Programmatic education assumes that certain knowledge is given to students in a consistent, integrated manner, not in separate parts.

In the 1970s and 1980s, "educational technology" was recognized as a branch of theoretical knowledge of pedagogy, which represented the educational process that guarantees the achievement of pre-planned and clearly defined goals, as well as information technologies in education.

With the passage of time, as a result of the expansion of the level of use of pedagogical technologies, the content changed accordingly. In 1979, the American Association of Pedagogical Technologies and Communications ended the debate about the meaning of pedagogical technologies and announced their official definition: "Pedagogical technology is the acquisition of people's ideas, knowledge, It is a complex integrative process that includes means of planning, provisioning, evaluation and management activities [3]. Currently, all pedagogic-psychological scientists recognize the following definition of UNESCO as the most perfect definition of pedagogical technology: It is the use of the integrated approach method in the design and implementation of the learning process" [4].

It can be seen that the basis of educational technology is the idea of full implementation of this process in order to increase the effectiveness of education and to guarantee that students will achieve the planned learning results in the given conditions. The essence of such an approach is to systematize the educational process - to maximize its formation with the help of clearly formalized and divided into specific elements.

Based on the above rules, the subject of pedagogical technologies consists of designing the educational system, from proving the conceptual foundations, choosing and structuring educational materials, choosing an educational model to their implementation, and evaluating their optimality and effectiveness. [5].

Modern pedagogical technologies based on didactic improvement and redevelopment of educational material. These technologies are based on principles such as the didactic system of studied knowledge having a deep content, approaching knowledge from a systematic point of view, and teaching students the most appropriate ways to acquire knowledge.

Modern pedagogical technologies based on effective management and organization of the educational process. These technologies include differentiated, individualized programmed educational technologies, collective method of education, group, computerized educational technologies.

Modern pedagogical technologies adapted to nature. These include modern pedagogical technologies based on the full use of the natural possibilities of organizing the educational process of students and other natural possibilities.



Modern developmental educational technologies. These include technologies for developing the positive qualities of students' personalities, knowledge in certain fields, and creative abilities.

In addition to these, there are directions of private (educational subjects), alternative and author modern pedagogical technologies.

Scientific studies, monographs and manuals (V.P. Bespalko, V.V. Guzeev, M.V. Klarin, V.M. Monakhov, V.Yu. Pityukov, G.K. Selevko, etc.), articles (T.S. Nazarova, LYa. Dyachenko, etc.) analysis shows that in the structure of pedagogical technologies, the following directions are distinguished, the main of which are empirical, cognitive, heuristic, creative, inversion, integrative, adaptive, inclusive pedagogical technologies. The main features of this direction are as follows:

Empirical - gaining knowledge through the senses. In this technology, the main attention is focused on imparting knowledge based on the natural development possibilities of sense organs and further improving them.

Cognitive - a technology for expanding the range of knowledge about the surrounding world. It forms differentiated thinking, critical thinking, and develops knowledge needs.

It is necessary to teach by asking heuristic - guiding questions. It is an educational method that serves to develop ingenuity, activity, and attention.

It has a creative-research character and rapidly develops goal-oriented creative thinking and critical thinking in students.

Inversion is a feature of studying information from different angles, replacing it, and develops a critical thinking system.

Integrative - determination of the only correct conclusion based on the inextricable interdependence of the infinite number of small parts that make up the information, their integrity, unity.

Adaptive - achieving the expected result on the basis of facilitating and adapting information and the process of its use for learning and teaching.

Inclusive - organization of the educational process on the basis of equality in the interaction between the teacher and the students.

Currently, in addition to the above, there are other areas of modern pedagogical technology that are being tested by experts.

It is known that if a person does not have a critical attitude to what he knows and learns, there will be no independence of thinking in the activity of knowledge.

The criticality of thinking is characterized by a person's ability to strictly evaluate his own and other people's opinions, fully prove and comprehensively check all the rules and conclusions put forward. A person with critical thinking never considers his thoughts to be absolutely true, flawless and complete. He always tries to test them in practice, and if his ideas do not correspond to reality, he looks for methods and evidence to answer them. Critical thinking is first of all an orderly, strict and responsible mind that does not accept everything as believable. Those who have a non-critical way of thinking accept any information they come across as their own.

Therefore, at the stage of development of the society today, the issue of educating independent, free and critical thinking young people is the most urgent task before us.

For this reason, it is necessary to activate the cognitive activity of students, to improve their independent and critical thinking abilities in the organization of the educational process at all



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stages of the continuous education system. After all, it is important for students to know how to sort the information of the world and to learn to critically, creatively and effectively evaluate what is important and what is not important. First of all, in order to know how to manage and sort information well, students should develop practical knowledge, critical thinking skills and abilities. This gives them the opportunity to effectively sort and choose information and ideas based on critical thinking, it leads to correcting the information and ideas that have been selected, and they can be turned into practical forms of action. In other words, it is necessary to turn them into habits of critical thinking. However, critical thinking is not formed by itself. They should develop experience and skills in obtaining useful information and opinions.

The process of critical analysis must continue regularly, the result of critical thinking is the development of critical thinking. In order for this to happen, teachers should use modern pedagogical technologies in the process of teaching involuntarily.

So, what is critical thinking? Regarding its definition, there are different opinions and assessments. According to some researchers, "critical thinking", "analytical thinking", "logical thinking", "creative thinking" and others - and we can agree with this, remembering the etymology of this word. "Criticism" (Greek kritique - "evaluation, analysis, discussion"); Consequently, "critical" means "evaluation, analysis". Critical thinking (alternatively dogmatic) can be understood as creative, analytical and constructive thinking. From the pedagogical point of view, we consider it as an active and interactive learning process. Critical thinking is interactive, creative, reflective thinking. Critical thinking means understanding and realizing one's own, objective, logical, perception of other points of view.

In addition, there are several definitions of the term "Critical thinking". Including J. Still, K. Meredis and Ch. Temple's manual "Chtenie i pismo dlya razvitiya kriticheskogo myshleniya", ("Reading and writing for the development of critical thinking") as a system of universal principles of teaching, in which the extensive use of interactive teaching methods is used for the effective development of critical thinking. it is stated that it allows.

The famous American philosopher and pedagogue D. Dewey defines the essence of critical thinking as follows: "Only a person's critical thinking in relation to the conditions and results of experience can direct personal desires and interests."

Diana Halpem writes in her book "Psikhologiya kriticheskogo myshleniya" ("The Psychology of Critical Thinking"): "Critical thinking is a form of cognitive skills and strategies that increase the likelihood of achieving a desired result, which is based on restraint, logic and purpose. is distinguished by orientation".

Anderson and his co-authors say, "Effective continuous learning for new situations is a problem for us to understand information and ideas. Pupils can achieve the highest results only when they actively absorb information and ideas.

According to Polinskar and Brown, "the learning process will be more successful only when various strategies for the development of thinking activity are used. In this case, the strategies ensure that the educational process is more conscious.

According to Resnik, "students will develop knowledge and creative thinking only if they can apply their knowledge in solving specific problems".

According to Ross, "learning that builds on students' prior knowledge and experiences is reinforced. All this gives students the opportunity to connect new information with what they already know.



According to Banks, "Critical thinking and reading will only work if teachers properly understand the diversity of ideas and experiences." If the spirit of "one answer" prevails, then critical thinking will be encouraged."

According to Agapov, "Critical thinking is aimed at developing students' skills in working with text, mastering all forms of oral and written speech, exchanging ideas with peers on a specific text (communication skills, group work skills) is a pedagogical technology". Critical thinking is changing the atmosphere in the classroom, giving it a touch of enthusiasm, and making the lessons a joy for the pedagogue and students. Such a technology is based on ideas such as the plurality of points of view of thinking and interpreting the text, reflexivity of the cognitive process, modern understanding of culture. The idea of personal worth and its development, self-realization and creation of favorable conditions for realization are the most important.

John Barrell defines the following characteristics of critical thinking people[6]: Critical thinkers:

- can solve problems;
- show a certain tenacity in solving problems;
- controlling oneself, impulsivity;
- openness to other ideas;
- able to solve problems by cooperating with other people;
- can listen to the interlocutor;
- empathic;
- has resistance to uncertainty;
- can consider problems from different points of view;
- able to establish many connections between events;
- they tolerate a point of view other than their own;
- can consider several options for solving the problem;
- often ask questions: "What if?";
- can make logical conclusions;
- thinking about feelings, thoughts evaluating them;
- able to make predictions, justify them and set active goals;
- can apply his skills and knowledge in different situations;
- curious and often asks "good questions";
- actively perceives information.

In conclusion, "A person has critical thoughts, gets acquainted with one or another idea, and takes into account the important consequences of their implementation. At the same time, a person initially perceives these ideas with a certain level of distrust and compares them with opposing points of view. He uses a system of additional considerations to justify them and develops his own point of view based on them. Critical thinking is a complex process of combining ideas and possibilities with creativity, as well as reconstructing a concept. It is also a process that takes place simultaneously at several levels of active and interactive cognition. A critical thinker will not be influenced by various tricks and unhealthy ideas, because he will have his own strong personal views.

References:



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From national revival to national rise. Tashkent-2017. - page 116. 1.

- 2. From the report given at the solemn ceremony dedicated to the 26th anniversary of the adoption of the Constitution of the Republic of Uzbekistan. 2018 year. December 10.
- Silber K.H. Some implication all of the history of Educational Technology We're all in this together. In: J. W. Brown and S. N. Brown. Educational Media Yearbook, Littleton, Colorado: Libraries Unlimited, 1981, p.21
- Silber K.H. Some implication alt of the history of Educational Technology We're all 4. in this together. In .(W. Brown and S.N. Brown. Educational Media Yearbook, Littleton, Colorado: Librares Unlimited, 1981, p.21.
- 5. Seminar training materials on the topic "Ways to increase the effectiveness of education". - T.: 2002, p. 31.
- Aganov I.G. Questions about the formation of critical thinking. 2001.No 6.
- Davlatmirzayevich, A. A. 应用远程教师专业发展: 基础阶段. SCIENTIFIC RESEARCH 7. OF THE SCO COUNTRIES: SYNERGY AND INTEGRATION, 40.
- Аскаров, А. Д. (2016). ПРОБЛЕМЫ ОРГАНИЗАЦИИ ДИСТАНЦИОННЫХ КУРСОВ 8. ПЕДАГОГИЧЕСКИХ КАДРОВ КВАЛИФИКАЦИИ **УЧЕТОМ** ОБРАЗОВАТЕЛЬНЫХ ПОТРЕБНОСТЕЙ. Іп Инновационные технологии в современном образовании (рр. 48-52).
- Askarov, A. (2015). Organizational-pedagogical stages of applying istance 9. professional development of pedagogic personnel. The advanced science journal, (4), 72.
- Аскаров. (2019).ТЕХНОЛОГИЯ ПРОГНОЗИРОВАНИЯ Д. РЕЗУЛЬТАТИВНОСТИ УЧЕБНЫХ ПРОЦЕССОВ В ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЯХ. ПРОБЛЕМЫ И ТЕНДЕНЦИИ НАУЧНЫХ ИССЛЕДОВАНИЙ В СИСТЕМЕ ОБРАЗОВАНИЯ, 11.
- Куронов, М., & Аскаров, А. Д. (2019). ПЕДАГОГИЧЕСКОЕ СОПРОВОЖДЕНИЕ 11. СЕМЕЙНОГО ДУХОВНО-НРАВСТВЕННОГО ВОСПИТАНИЯ ДЕТЕЙ ДО 18 ЛЕТ (ИЗ ОПЫТА УЗБЕКИСТАНА). In Havka и инновации-современные концепции (pp. 55-59).
- 12. Аллаярова, С. Н., & Аскаров, А. Д. THE NEEDS OF IMPLEMENTING INFORMATION TECHNOLOGIES IN HIGHER EDUCATION (The case of Uzbekistan as an example) НЕОБХОДИМОСТЬ РЕАЛИЗАЦИИ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ ОБРАЗОВАНИИ (на примере Узбекистана).
- Askarov, A. D. (2020). The needs of implementing information technologies in 13. higher education (The case of Uzbekistan as an example). In Информационные и инновационные технологии в науке и образовании (рр. 14-18).
- Аллаярова, С. Н., & Аскаров, А. Д. THE NEEDS OF IMPLEMENTING INFORMATION 14. TECHNOLOGIES IN HIGHER EDUCATION (The case of Uzbekistan as an example) НЕОБХОДИМОСТЬ РЕАЛИЗАЦИИ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ В ВЫСШЕМ ОБРАЗОВАНИИ (на примере Узбекистана).
- Аскаров, А. Д. (2021). УМУМТАЪЛИМ МАКТАБЛАРИ ЎҚУВЧИЛАРИДА ХАЛҚ 15. ХУНАРМАНДЧИЛИГИГА БЎЛГАН ПСИХОЛОГИК-ПЕДАГОГИК ИМКОНИЯТЛАР: DOI: https://doi. org/10.53885/edinres. 2021.86. 41.080 Аскаров Аброр Давлатмирзаевич, Педагогика фанлари бўйича фалсафа доктори (PhD), доцент. Термиз давлат университети, Таълим сифатини назорат қилиш бўлими бошлиғи. Образование и инновационные исследования международный научно-методический журнал, (1-Махсус сон), 28-31.

- 16. Аскаров, А. Д. (2021). ТЕХНОЛОГИЯ МАШҒУЛОТЛАРИДА АХБОРОТ ТЕХНОЛОГИЯЛАРИНИ ҚЎЛЛАШНИНГ ҚИЁСИЙ ТАХЛИЛИ: DOI: https://doi.org/10.53885/edinres. 2021.83. 76.005 Аскаров Аброр Давлатмирзаевич, Педагогика фанлари бўйича фалсафа доктори (PhD), доцент. Термиз давлат университети, Таълим сифатини назорат қилиш бўлими бошлиғи. Образование и инновационные исследования международный научно-методический журнал, (1-Махсус сон), 24-27.
- 17. Davlatmirzaevich, A. A. (2021). Competences in information and communication technologies.
- 18. Davlatmirzaevich, A. A. (2021). COMPETENCES IN INFORMATION AND COMMUNICATION TECHNOLOGIES (ON THE EXAMPLE OF UNIVERSITY PROFESSORS).
- 19. Davlatmirzaevich, A. A. (2021). The online environment for faculty development management environment and its structure.
- 20. Davlatmirzayevich, A. A. (2022). Main Tendencies and Modern Models of Educational Quality Management. Eurasian Scientific Herald, 6, 16-23.
- 21. Askarov, A. (2022). RAQOBATBARDOSH KADRLARNI TAYYORLASHDA OLIY TA'LIM SIFATI MENEJMENTINING ZAMONAVIY TENDENSIYALARI. Физикотехнологического образование, (3).
- 22. Аскаров, А. Д. (2022). ОЛИЙ ТАЪЛИМ МУАССАСАНИ РИВОЖЛАНТИРИШ СТРАТЕГИЯСИ ВА БОШҚАРУВ ҚАРОРЛАРИНИ ДИЗАЙН-ТАФАККУР ЁНДАШУВИ АСОСИДА ШАКЛЛАНТИРИШ. BOSHQARUV VA ETIKA QOIDALARI ONLAYN ILMIY JURNALI, 2(9), 10-18.
- 23. Аскаров, А. Д. (2022). ОЛИЙ ТАЪЛИМ МУАССАСАСИДА ТАЪЛИМ СИФАТИ МОНИТОРИНГИНИ ТАКОМИЛЛАШТИРИШНИНГ АЙРИМ ЖИХАТЛАРИ: DOI: https://doi. org/10.53885/edinres. 2022.84. 66.014 Аскаров Аброр Давлатмирзаевич, Педагогика фанлари бўйича фалсафа доктори (PhD), доцент. Термиз давлат университети таълим сифатини назорат қилиш бўлими бошлиғи. Образование и инновационные исследования международный научно-методический журнал, (3), 68-77.
- 24. Аскаров, А. Д. (2022). ОЛИЙ ТАЪЛИМ МАЗМУНИГА БЎЛГАН КАДРЛАР БУЮРТМАЧИЛАРИ ТАЛАБЛАРИ ВА ИЖТИМОИЙ ЭХТИЁЖЛАРНИ ТИЗИМЛАШТИРИШ. ИННОВАЦИИ В ПЕДАГОГИКЕ И ПСИХОЛОГИИ, 5(5).
- 25. Shomirzayev M. K. Developing Educational Technologies In School Technology Education //Next Scientists Conferences. 2022. C. 14-23.
- 26. Shomirzayev M. K. et al. National handicrafts of Uzbekistan and its social–economic significance //European Journal of Research and Reflection in Educational Sciences. 2020. T. 8. Nº. 8. C. 129-138.
- 27. Shomirzayev M. K. Education is personally focused technology //European Journal of Research and Reflection in Educational Sciences Vol. 2020. T. 8. Nº. 8.
- 28. Shomirzayev M. K. Technology of Educational Process in School Technology Education //The American Journal of Social Science and Education Innovations. 2020. T. 2. N° . 07. C. 212-223.
- 29. Shomirzayev M. K. The Ethical Characteristics of Traditional Embroidery of Fergana Valley People //European Journal of Research and Reflection in Educational Sciences. 2019. T. 2019.



- 30. Shomirzayev M. K. Local features of the traditional embroidery of the Ferghana valley //European Journal of Research and Reflection in Educational Sciences. -2019. - T. 2019.
- 31. Shomirzayev M. K. The Concept Of Pedagogical Technology And Basic Principles. Academicia: An International Multidisciplinary Research Journal.(Affiliated to Kurukshetra University, Kurukshetra, India), Vol. 10, Issue 11, November 2020 Scientific Journal Impact Factor (Sjif 2020-7.13).-Part 1554-1563.
- 32. Shomirzayev M. K. The concept of pedagogical technology and basic principles //ACADEMICIA: An International Multidisciplinary Research Journal. – 2020. – T. 10. – №. 11. - C. 1551-1560.
- 33. Shomirzayev M. K. Ethnic characteristics of national traditional crafts //European Journal of Research and Reflection in Educational Sciences Vol. - 2020. - T. 8. - №. 12. - C. 216-225.
- 34. Shomirzayev M. K. Practical lessons in technology: Characteristics of organization and conduct //Asian Journal of Multidimensional Research. - 2021. - T. 10. - №. 4. - C. 991-1001.
- 35. Shomirzayev M. K., Yuldashov K. K. The Educational Importance of Teaching Knowledge to Secondary School Students //CURRENT RESEARCH JOURNAL OF PEDAGOGICS. - 2021. - T. 2. - №. 08. - C. 132-142.
- Shomirzayev M. K. Ethnic peculiarities of artistic embroidery of the peoples of the 36. Ferghana valley //European Journal of Research and Reflection in Educational Sciences.-7 (12).-P. – 2019. – T. 967.
- 37. Shomirzayev M. K. Combined In Technology Courses Use Of Technologies //The American Journal of Social Science and Education Innovations. – 2021. – T. 3. – №. 05. – C. 389-396.
- 38. Shomirzayev M. X., Karimov I. I. Innovative pedagogical technologies in teaching technology //T.: "Universitet. – 2020. – T. 125.
- 39. Shomirzayev M. X. Innovative processes in Uzbek national handicrafts //T.:"New edition. - 2019.
- 40. Шомирзаев M. X. Мактаб технология миллий таълимида хунармандчиликнинг компонентларини спектрал-вариатив фанлараро такомиллаштириш. Педагогика фанлари бўйича докторлик (ДSc) дисс //Т.: Tafakkur. -2020. - T. 164.
- Shomirzayev S. National followers in the students use of educational technologies instruction of interests //International Journal of Linguistics, Literature and Culture. - 2021. -T. 7. – №. 3. – C. 152-157.
- Shomirzayev M. X. Ways to increase the effectiveness of teaching technology 42. //Methodological manual. – 2019.
- 43. Shomirzaev M. X. Innovative pedagogical technologies in teaching technology. Textbook //T: Tafakkur. - 2021.
- 44. Texnologiya fanini o'qitishda, Shomirzayev MX. "innovatsion pedagogik texnologiyalar. Darslik." T.: "TerDU nashr-matbaa markazi 226 (2020).
- 45. Shomirzayev M. K., Yuldashov K. K. Use of Some Historical Materials in Technology Education Classes //International Journal of Multicultural and Multireligious Understanding. - 2021. - T. 8. - №. 11. - C. 184-195.



- 46. Shomirzayev M. K., Yuldashov K. K. Student-Folk Craft for Young People Teaching History as a Factor of National Education //International Journal of Multicultural and Multireligious Understanding. – 2021. – T. 8. – №. 8. – C. 475-486.
- 47. Texnologiya fanini oʻqitishning S. M. X. samaradorligini oshirish yoʻllari //T.:"Gold print nashr. - 2019. - T. 42.
- 48. Shomirzayev M. K. Pedagogical technologies-as a factor to increase student knowledge in school technology classes //current research journal of pedagogics. - 2021. - T. 2. – Nº. 05. – C. 84-96.
- 49. Shomirzayev M. K., Pakhratdinova R. O. Characteristics of Organization and Conduct of Practical Courses on National Crafts in Technology //Asian Journal of Research in Social Sciences and Humanities. – 2021. – T. 11. – №. 9. – C. 182-192.
- 50. Shomirzaev M. X. The use of modern teaching methods in teaching school students folk crafts //The teacher is also constantly informed.-Nukus. – 2020. – C. 42-46.
- 51. Shomirzaev M. X. Problem-based education in the lessons of Technology" //Modern education. Tashkent. - 2020. - №. 6. - C. 91.
- Шомирзаев М., Авазов Ж. OLIY TA'LIM TIZIMIDA BO 'LAJAK MUHANDISLARNING 52. TAYYORLASHNING BA'ZI JIHATLARI //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). -2021. – T. 4. – №. 4.
- 53. Шомирзаев М. Х. ТЕХНОЛОГИЯ ФАНИНИ ЎКИТИШДА ИННОВАЦИОН ПЕДАГОГИК ТЕХНОЛОГИЯЛАРИДАН ФОЙДАЛАНИШ МЕТОДИКАСИ: DOI: https://doi. org/10.53885/edinres. 2021.44. 86.020 Шомирзаев Махматмурод Хурамович Термиз давлат университети технологик таълим кафедраси доценти, педагогика фанлари доктори (DSc) //Образование и инновационные исследования международный научнометодический журнал. – 2021. – №. 1-Махсус сон. – С. 321-330.
- 54. Shomirzaev M. X. Theory and practice of interdisciplinary improvement of spectralvariable components of national crafts in school technology education. Monograph //T.: Tafakkur. - 2020.
- 55. Шомирзаев М. Х. Ўқувчиларда халқ хунармандчилиги касбларига қизиқишни фанлараро шакллантириш омиллари //Мактаб ва ҳаёт. - 2019. - С. 23-24.
- 56. Kh S. M. Young People from" Technology" to Profession Training as a Factor of Competitive Personnel Training //International Journal of Multicultural and Multireligious Understanding. – 2021. – T. 8. – №. 4. – C. 580-591.
- 57. Shomirzaev M. X. Improving the orientation of students to the professions of folk crafts in technology education //Science and society (Science is also society).-Nukus. - 2020. -C. 98-100.
- 58. Shomirzaev M. X. Psychological and pedagogical potential of folk crafts in school technology education //Tafakkur ziyosi.-Jizzax. – 2020. – №. 4. – C. 154-155.
- 59. Шомирзаев М. X. Таълим технологияларидан фойдаланиш муаммолари //Замонавий таълим. – 2019. – Т. 9. – №. 82. – С. 25-31.
- Шомирзаев М. Х. Ўқувчиларда халқ миллий хунармандчилиги касбларига 60. қизиқишни шакллантиришда таълим технологияларидан фойдаланиш //Қорақалпоқ давлат университетининг хабарномаси.-Нукус. - 2019. - Т. 4. - №. 45. - С. 98-102.



INTERNATIONAL BULLETIN OF APPLIED SCIENCE AND TECHNOLOGY

UIF = 8.2 | SJIF = 5.955

- 61. Shomirzaev M. X. The use of educational technologies in the formation of students' interest in the professions of national crafts //Karakalpak State University Bulletin.-Nukus. – 2019. – T. 4. – №. 45. – C. 98-102.
- Shomirzaev M. X. Factors of interdisciplinary formation of students' interest in folk 62. crafts //School and life. - C. 23-24.
- Shomirzayev M. K., Yuldashov K. K. Carpenter, jewelery, knifecourse development 63. of application methods //Asian Journal of Multidimensional Research. – 2021. – T. 10. – №. 8. - C. 302-308.
- Shomirzaev M. X. Interethnic peculiarities of embroidery //Sources of knowledge. 64. Urgench. - 2020. - Nº. 4. - C. 189-192.
- 65. Шомирзаев М. Х. Ўзбекистонда миллий хунармандчилик ривожла-нишининг тарихий-ижтимоий асослари/Таълим-тарбия контекстида фанлараро синхрон ва асинхрон боғланишлар. Илмий-услубий мақолалар туплами //Т.: Noshirlik vog'dusi. – 2019. - C. 52-57.
- Шомирзаев М. Х. Технология обучения народному-прикладному исскусству, 66. трудовое и эстетическое воспитание учащихся V-VII классов общеобразовательных школ. Монография //Т.: Yangi nashr. - 2019.
- 67. Шомирзаев М. Х. Технология фанини ўкитиш жараёнида интерфаол методлардан халк хунармандчилигида фойдаланиш имкониятлари/Таълим-тарбия контекстида фанлараро синхрон ва асинхрон боғланишлар. Илмий-услубий мақолалар тўплами //Т.: Noshirlik yog'dusi. - 2019. - С. 130-136.
- 68. Shomirzaev M. X. Vocational education: national embroidery //Pedagogy. – T. 2019. - C. 122-129.
- 69. Shomirzaev M. X. Problems of using educational technologies //Modern education. - C. 25-3.
- 70. Шомирзаев М. Х. Технология таълимида ўкувчиларни халқ хунар-мандчилиги касбларига йўналтиришни такомиллаштириш //Fan va jamiyet (Ilim ham jamiyet).-Нукус. - 2020. - С. 98-100.
- Shomirzaev M. X. Interdisciplinary improvement of spectral-variable components 71. of national crafts in school technology education. Monograph //T. "Tafakkur. – 2020.
- 72. Shomirzayev M. X. Ways to increase the effectiveness of teaching technology //Methodological manual. – 2019.
- 73. Shomirzayev M. X. Genesis of formation and development technology of Uzbek national handicrafts //T.:"Yangi Nashr. - 2019.
- Shomirzayev M. X. Spectral-variable components of Uzbek national handicrafts 74. //T.: "Yangi Nashr. - 2019.
- Шомирзаев М. Х. Ўзбек миллий хунармандчилигида мато тайёрлаш-нинг 75. ўзига хос жихатлари //Тафаккур зиёси.-Жиззах. - 2019. - С. 69-71.
- 76. Шомирзаев М. Х. Бойсун қуроқчилик санътини ўргатишда тарихий анъаналарнинг ўрни //Бойсун-моддий ва номоддий маданияти бешиги" мавзусидаги Халқаро илмий-амалий конференцияси.-Т.: Yangi nashr. - 2018. - С. 62-67.
- Shomirzaev M. X. Genesis of formation and development technology of Uzbek 77. national handicrafts. Educational-methodical manual //T.: New edition. – 2016.
- 78. Rakhmatillayev A. et al. Dynamics of the effectiveness of interactive methods //T.:"Avu press-consultant. – 2015. – C. 60.



- 79. Abdiev K. M. et al. COMPARATIVE EVALUATION OF NEW TREATMENTS FOR IMMUNE THROMBOCYTOPENIA //NVEO-NATURAL VOLATILES & ESSENTIAL OILS Journal NVEO. - 2021. - C. 10160-10166.
- Шомирзаев М. Х., Хайруллаев И. Н. МАКТАБ ЎҚУВЧИЛАРИНИ ХАЛҚ ХУНАРМАНДЧИЛИГИГА ЎРГАТИШДА ИННОВАЦИОН ТАЪЛИМ МЕТОДЛАРИДАН ФОЙДАЛАНИШ: DOI: https://doi. org/10.53885/edinres. 2021.50. 31.014 Шомирзаев Махматмурод Хурамович Термиз давлат университети технологик таълим кафедраси доценти, педагогика фанлари доктори (DSc). Хайруллаев Исматулло Нуруллаевич Термиз давлат университети доценти //Образование и инновационные исследования международный научно-методический журнал. – 2021. – №. 1-Махсус сон. – С. 367-371.
- Шомирзаев М. Х. "ТЕХНОЛОГИЯ" ФАНИ ДАРСЛАРИДА МУАММОЛИ ТАЪЛИМ 81. //Современное образование (Узбекистан). – 2020. – №. 6 (91). – С. 28-36.
- Шомирзаев М. Х. Зардўзлик хунарини ўкувчиларга ўргатишда миллий 82. анъаналарнинг ахамияти. - 2019.
- Shomirzaev M. X. Opportunities for the integration of sciences in the formation of 83. students' interest in the professions of national crafts //Science and society (Science and society).-Nukus. - 2019. - №. 3. - C. 106-108.
- Шомирзаев М. Х. Ўзбек каштадўзлигининг шаклланиш генезиси ва 84. ривожланиш технологияси //Муғаллим ҳем узлуксиз билимлендириў.-Нукус. - 2019. -C. 73-82.
- 85. Шомирзаев М. Х. Анъанавий каштадўзликда махаллий жихатлар //Илм сарчашмалари.-Урганч. - 2019. - С. 140-144.
- 86. Шомирзаев М. Х. Технология фани жараёнида ўкувчиларни тадбиркорлик ва кичик бизнес фаолиятига тайёрлаш/Таълим-тарбия контекстида фанлараро синхрон ва асинхрон боғланишлар. Илмий-услубий мақолалар тўплами //Т.: Noshirlik yog'dusi. – 2019. - C. 176-178.
- 87. Шомирзаев М. Х. Касбий таълим: миллий каштадўзлик //Педагогика. - 2019. - C. 122-129.
- 88. Шомирзаев М. Х. Ўзбек миллий хунармандчилигида инновацион жараёнлар. Ўқув-услубий қўлланма //Т.: Yangi nashr. – 2017. – Т. 48.
- 89. Исмаилов Х. Х. и др. Матер. конф." Фотоэлектрические явления в полупроводниках-2004. - 2004.
- Шомирзаев М. Х. Ўзбек миллий ҳунармандчилигининг спектирал-вариатив 90. компонентлари. Услубий қўлланма //Т.: "Янги нашр. – 2019. – Т. 48.
- 91. Шомирзаев М. Х. Технология фанини ўкитишнинг самарадорлигини ошириш йўллари. Ўқув-методик қўлланма //Т.: Gold print nashr. – 2019. – Т. 56.
- 92. Шомирзаев М. Х. Миллий хунармандчилик одоби. - 2018.
- Э. ЎҚУВЧИЛАРНИНГ 93. Кадыров Б. **ХУНАРМАНДЧИЛИККА** ОИД ТАЯНЧ КОМПЕТЕНЦИЯЛАРИНИ ЭЛЕКТРОН АХБОРОТ ТАЪЛИМ МУХИТИДА РИВОЖЛАНТИРИШНИНГ ДИДАКТИК МОДЕЛИ: DOI: https://doi. org/10.53885/edinres. 2021.37. 29.058 Қодиров Бахтиёр Эшмурзаевич Термиз давлат университети, педагогика фанлари бўйича фалсафа доктори (PhD) //Образование и инновационные исследования международный научно-методический журнал. – 2021. – №. 1-Махсус сон. - C. 128-132.

- 94. Shomirzaev M. K., Astanakulov K. D., Babaev K. M. Research into the perforated surface of the double staged grinder-crusher //IOP Conference Series: Earth and Environmental Science. – IOP Publishing, 2022. – T. 1076. – №. 1. – C. 012035.
- Astanakulov K. D., Kurbonov F. K., Shomirzaev M. K. Development of fish feed 95. distributor device //IOP Conference Series: Earth and Environmental Science. - IOP Publishing, 2022. – T. 1076. – №. 1. – C. 012032.
- Шомирзаев М. Х. ТЕХНОЛОГИЯ ТАЪЛИМИДА ЎКИТИШ ШАКЛЛАРИ ВА 96. МЕТОДЛАРИ: DOI: https://doi. org/10.53885/edinres. 2021.11. 39.016 Шомирзаев Махматмурод Хурамович Термиз давлат университети технологик таълим кафедраси доценти, педагогика фанлари доктори (DSc) //Образование и инновационные исследования международный научно-методический журнал. – 2021. – №. 1-Махсус сон. - C. 353-358.
- 97. Shomirzavev М. ЎҚУВЧИЛАР ТАЪЛИМ ВА ТАРБИЯСИДА КАШТАЧИЛИКНИНГ ЎРНИ //Физико-технологического образование. – 2022. – №. 3.
- ЎКИТИШДА ИННОВАЦИОН 98. Shomirzavev M. ПЕДАГОГИК ТЕХНОЛОГИЯЛАРИДАН ФОЙДАЛАНИШ //Физико-технологического образование. – 2022. - Nº. 3.
- 99. Xuramovich S. M. Individually Directed some Features of Technology //Eurasian Journal of Engineering and Technology. – 2022. – T. 4. – C. 59-65.
- Xuramovich S. M. IN TEACHING TECHNOLOGY TEACHER'S CREATIVE APPROACH 100. //World Bulletin of Social Sciences. – 2022. – T. 8. – C. 32-37.
- Kh S. M. National Crafts And Socio-Economic Activity //The American Journal of 101. Applied sciences. – 2021. – T. 3. – №. 04. – C. 32-46.
- 102. M. X. ТЕХНОЛОГИЯ ТАЪЛИМДА ЎҚУВЧИЛАРНИ ХАЛК Шомирзаев **ХУНАРМАНДЧИЛИГИ** КАСБЛАРИГА ЙЎНАЛТИРИШ: DOI: https://doi. org/10.53885/edinres. 2021.81. 45.017 Шомирзаев Махматмурод Хурамович, Термиз давлат университети технологик таълим кафедраси доценти, педагогика фанлари доктори (DSc) //Образование и инновационные исследования международный научнометодический журнал. – 2021. – №. 1-Махсус сон. – С. 346-352.
- 103. Шомирзаев М. Х. МАКТАБ ТЕХНОЛОГИЯ ТАЪЛИМИДА ЎҚУВЧИЛАРНИ МИЛЛИЙ ХУНАРМАНДЧИЛИКНИНГ СПЕКТРАЛ-ВАРИАТИВ КОМПОНЕНТЛАРИ БИЛАН ФАНЛАРАРО ТАНИШТИРИШДА ТАРИХИЙЛИК ПРИНЦИПИ: DOI: https://doi. org/10.53885/edinres. 2021.88. 48.019 Шомирзаев Махматмурод Хурамович, Термиз давлат университети технологик таълим кафедраси доценти, педагогика фанлари доктори (DSc) //Образование и инновационные исследования международный научнометодический журнал. – 2021. – №. 1-Махсус сон. – С. 331-341.
- 104. Шомирзаев М. Х., Мухамадиева Н. К. МИЛЛИЙ ТАРБИЯДА КАШТАЧИЛИКНИНГ ЎРНИ: DOI: https://doi. org/10.53885/edinres. 2021.78. 80.018 Шомирзаев Махматмурод Хурамович, Термиз давлат университети технологик таълим кафедраси доценти, педагогика фанлари доктори (DSc). Мухамадиева Наргиза Қудратовна, Термиз давлат университети Таълим ва тарбия назарияси ва назарияси (Технологик таълим) магистранти //Образование и инновационные мутахассислиги международный научно-методический журнал. – 2021. – №. 1-Махсус сон. – С. 342-345.



INTERNATIONAL BULLETIN OF APPLIED SCIENCE

- 105. Шомирзаев М. Х. ТЕХНОЛОГИЯ ФАНИДАН АМАЛИЙ ДАРСЛАРНИ ТАШКИЛ ЭТИШ ВА ЎТКАЗИШ МЕТОДИКАСИ: DOI: https://doi. org/10.53885/edinres. 2021.26. 95.021 Шомирзаев Махматмурод Хурамович, Термиз давлат университети технологик таълим кафедраси доценти, педагогика фанлари доктори (DSc) //Образование и инновационные исследования международный научно-методический журнал. – 2021. – №. 1-Махсус сон. – С. 312-320.
- 106. Шомирзаев M. X. **TEXNOLOGIYA** TA'LIMIDA **TARBIYA IARAYONINI** TEXNOLOGIYALASHTIRISH: DOI: https://doi. org/10.53885/edinres. 2021.67. 13.031 Shomirzaev Maxmatmurod Xuramovich, Termiz davlat universiteti texnologik ta'lim kafedrasi dotsenti, pedagogika fanlari doktori (DSc) //Образование и инновационные исследования международный научно-методический журнал. – 2021. – №. 1-Махсус сон. – С. 263-268.
- Шомирзаев М. Х. ТЕХНОЛОГИЯ ФАНИ ДАРСЛАРИНИ ТАШКИЛ ЭТИШНИ 107. ТАКОМИЛЛАШТИРИШ: DOI: https://doi. org/10.53885/edinres. 2021.16. Шомирзаев Махматмурод Хурамович, Термиз давлат университети технологик таълим доценти. педагогика фанлари доктори (DSc) //Образование кафедраси инновационные исследования международный научно-методический журнал. - 2021. -№. 1-Махсус сон. – С. 359-366.
- Шомирзаев M. X. TEXNOLOGIYA TA'LIMIDA TA'LIMNING SHAXSGA YO 108. 'NALTIRILGAN TEXNOLOGIYASI: DOI: https://doi. org/10.53885/edinres. 2021.49. 15.032 Shomirzaev Maxmatmurod Xuramovich, Termiz davlat universiteti texnologik ta'lim kafedrasi dotsenti, pedagogika fanlari doktori (DSc) //Образование и инновационные исследования международный научно-методический журнал. – 2021. – №. 1-Махсус сон. – С. 255-262.
- Шомирзаев М. Х. ТЕХНОЛОГИЯ ТАЪЛИМИДА ЎҚИТИШ ШАКЛЛАРИ ВА 109. МЕТОДЛАРИ: DOI: https://doi. org/10.53885/edinres. 2021.11. 39.016 Шомирзаев Махматмурод Хурамович Термиз давлат университети технологик таълим кафедраси доценти, педагогика фанлари доктори (DSc) //Образование и инновационные исследования международный научно-методический журнал. – 2021. – №. 1-Махсус сон. - C. 353-358.
- 110. Shomirzayev M. K. Developing Educational Technologies In School Technology Education //Next Scientists Conferences. – 2022. – C. 14-23.
- МАНОRAT: ЎЗБЕКИСТОН 111. Шомирзаев M. PEDAGOGIK РЕСПУБЛИКАСИ ижтимоий-иктисодий СОХАСИ РИВОЖЛАНИШИДА миллий ХУНАРМАНДЧИЛИКНИНГ АХАМИЯТИ //ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz). -2020. – T. 2. – №. 2.
- 112. Shomirzaev M. K. Factors in the development of national art. – 2020.
- 113. Шомирзаев M. Таълим технологияларини X. кўллаш муаммолари //Современное образование (Узбекистан). – 2019. – №. 9 (82). – С. 25-31.
- 114. Якубов С. Х., Шомирзаев М. Х. Инновационные подходы к совершенствованию уроков технологии в средних общеобразовательных школах Республики Узбекистан //МИР ОБРАЗОВАНИЯ—ОБРАЗОВАНИЕ В МИРЕ. - 2019. - С. 110.
- 115. Sidikov I. K., Shomirzaev B. U. Two-level fuzzy adaptive regulation of dynamic objects //Management. - 2018. - T. 2018. - №. 4. - C. 7.
- Kh S. M. Innovation Pedagogical Technologies Used in School Technology 116. Education.

