- 9. Хакимов А. А. и др. Определение показателей качества угольного брикета //Universum: химия и биология. -2021. N 5-2 (83). -C. 40-44.
- 10. Вохидова Н.Х. Хакимов А.А., Салиханова Д.С., Ахунбаев А.А. Анализ связующих из местного сырья для брикетированния углольной мелочи // Научнотехнический журнал ФерПИ. 2019. Scientific-technical journal (STJ FerPI, ФарПИ ИТЖ, НТЖ ФерПИ, 2019, Т.23, спец. №3). С. 69-74.
- 11. Хакимов А.А.Совершенствование технологии получения угольных брикетов с использованием местных промышленных отходов: Дисс. ... PhD. Ташкент, 2020. 118 с.
- 12. Вохидова Н. Х. и др. Анализ связующих из местного сырья для брикетированния углольной мелочи //Научно-технический журнал ФерПИ.—2019.-Scientific-technical journal (STJ FerPI, ФарПИ ИТЖ, НТЖ ФерПИ, 2019, Т. 23, спец. № 3).—С. С. 69-74.
- 13. Xakimov A., Voxidova N., Rajabov B. ANALYSIS OF COLLECTION OF COAL BRICKETS TO REMOVE TOXIC GAS //Барқарорлик ва Етакчи Тадқиқотлар онлайн илмий журнали. -2021. T. 1. №. 5. С. 85-90.
- 14. Xakimov A. et al. ANALYSIS OF COAL BRICKET STRENGTH DEPENDENCE ON HUMIDITY //Барқарорлик ва Етакчи Тадқиқотлар онлайн илмий журнали. -2021. T. 1. №. 5. С. 79-84.
- 15. Xakimov A. et al. THE DILIGENCE OF DRYING COAL POWDER IN THE PROCESS OF COAL BRICKET MANUFACTURING //Барқарорлик ва Етакчи Тадқиқотлар онлайн илмий журнали. -2021. -T. 1. -№. 5. -C. 64-71.
- 16. Xakimov A., Voxidova N., Xujaxonov Z. ANALYSIS OF MAIN INDICATORS OF AGRICULTURAL PRESS IN THE PROCESS OF COAL POWDER BRICKETING //Барқарорлик ва Етакчи Тадқиқотлар онлайн илмий журнали. 2021. Т. 1. N2. 5. С. 72-78.
- 17. Akhmedovich K. A. et al. The Diligence of Drying the Coal Dust in the Process of Obtaining the Coal Brickets //International Journal of Innovative Analyses and Emerging Technology.  $-2021. T. 1. N_{\odot}. 5. C. 111-115.$

## PEDAGOGICAL POSSIBILITIES OF IMPROVING GENERAL TECHNICAL TRAINING OF STUDENTS BY MEANS OF HEURISTIC PROBLEMS

## Turdiev J.P.

Tashkent State Technical University turdiyevjamoliddin63@gmail.com

**Annotation:** This article discusses the pedagogical conditions and opportunities for improving the general technical training of bachelors of vocational education through heuristic questions, the better the general technical training of graduates and the higher their pedagogical competence, the more competitive they will be and the more in demand in the labor market. The main goal and task of the heuristic approach

in the process of training in vocational education is to form the basis of professional skills in the chosen profession (specialty) and provide students with knowledge for practical preparation for future work in the profession.

**Key words:** vocational education, heuristic approach, heuristics, didactic heuristics, specialization, heuristic education, general technical training, general professional, training content.

In order to improve the general technical training of students by means of heuristic problems, it is necessary to provide the necessary pedagogical conditions in higher education institutions, to develop the pedagogical basis for improving the general technical training of future professional teachers, to determine their psychological and pedagogical conditions, and to justify the criteria that determine the level of improvement of their general technical training.

At present, heuristic methods have been theoretically proven to some extent to be an effective means of improving the general technical training of future teachers of professional education. Because pedagogical heuristics was formed as an independent scientific-pedagogical direction at the end of the 20th century. In the professional education system, a wide range of successful issues of heuristic methods for developing the professional training of students in all areas of education are gaining relevance, because heuristics are an integral part of many modern professions as an element of creativity, creativity, innovation. More attention is paid to the formation of the following heuristic skills in students of higher education institutions: creative potential, heuristic competencies and heuristic thinking.

The leading idea of this research work is that the educational and development possibilities and effectiveness of heuristics are determined by its didactic comprehensibility, i.e. the freedom of the questions asked, the innovations in the solution, the diversity of the options on the way to finding the solution, the conciseness, the focus on obtaining information, knowledge, and the assimilation of educational information.

60112400 — Professional education (vehicle engineering (autotransport)) bachelors of technical higher education institutions - professional and general technical training of future professional education teachers can be considered as a system that includes: general technical culture, methodological training of the teacher, pedagogical technical and software tools in the educational process, effective use of information and communication technologies, technological, creative and special training).

Based on this, it can be said that the analysis of educational programs required in higher education institutions, applied scientific and training centers determines their orientation towards innovative technologies. In this context, bachelors of professional education (vehicle engineering (autotransport)) - future teachers of professional education are directed to solve various non-standard problems, saturated with heuristic elements. Among them, in particular, they have information about the items required in the field of demonstration of innovative methods and teaching to work in a high-tech environment, use of new educational equipment and tools and modernization (modernization) of existing ones, development of new pedagogical software tools and their use, production and management. can include being. These elements and

functions of general technical training require the development of technical thinking, the ability to work with technical data, as well as the implementation of theoretical solutions, abstract models and practical constructions, the development of models, prototypes, layouts.

Pedagogical conditions that ensure the implementation of the heuristic approach in education can be grouped as follows:

- 1) didactic conditions (purpose, content, forms, methods and teaching technologies of education) that ensure the acquisition of basic technical skills by students during the educational process and, on this basis, the improvement of general technical training in them;
- 2) organizational and management conditions (forms, means and methods of organizing and managing the educational process) necessary for the organization of the educational process directed to creative thinking;

professional-methodical conditions related to the preparation of bachelors of professional education to implement the heuristic approach in professional education and the development of educational-methodical support of the educational process aimed at improving general technical training by means of heuristic issues.

Technical higher education institutions While thinking about general technical creative training of students, first of all it is necessary to thoroughly analyze the nature of general technical creative training. Studying the nature of general technical creative training is considered a very complicated issue, if it is allowed to say, because it is entrusted with the task of solving important methodological issues of studying technology, man and nature. These processes include the sources of improvement of general technical creative training, the interrelation between technical, technological, biological and social, objective and subjective, individual and collective.

In short, technical higher education institutions should improve both procedural and creative qualities of the individual in improving general technical preparation of students by means of heuristic problems.

Therefore, general technical training of students in technical higher education institutions is a complex structure of professional pedagogical training, which determines its activity and general cultural, general technical knowledge, skill, skills, general technical creative approach, social orientation of the person, in general, is a complex that ensures finding solutions to general technical issues.

## Literature:

- 1. Турдиев Ж.П. Профессионал таълимда ишлаб чикариш таълимининг методик таъминоти масалалари. Таълим тизимида ижтимоий-гуманитар фанлар, №4, 2020. –Б. 22-26.
- 2. Турдиев Ж.П. Касб-хунар коллежларида назарий ва амалий таълимни ташкил этиш Ж-л: Таълим тизимида ижтимоий-гуманитар фанлар, №1, 2020.
- 3. Самадходжаева Д., Турдиев Ж.П., Таълим жараёнида шахсга йўналтирилган таълим технологиялари. Гармонично развитое поколение условие стабильного развития Республики Ўзбекистан. Сборник научнометодических статей. Ташкент, 2019 й. 216-218 бб.