



PEDAGOGICAL EDUCATIONAL TECHNOLOGY: ESSENCE, CHARACTERISTICS AND EFFICIENCY

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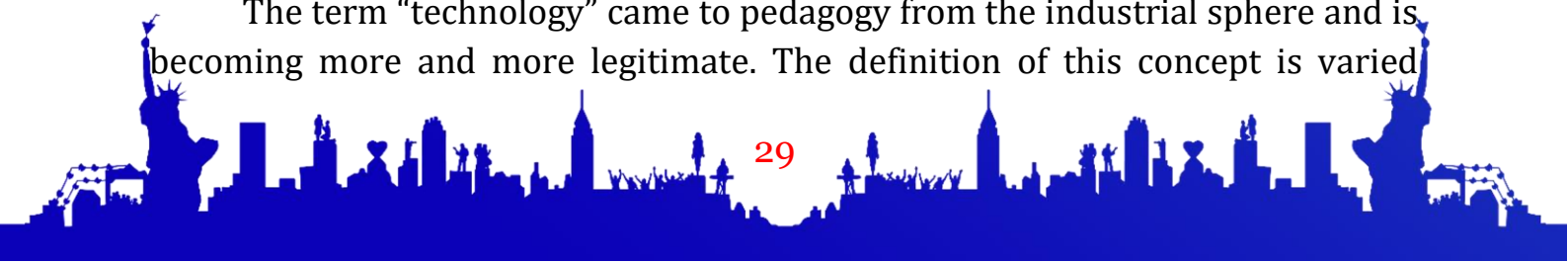
<https://doi.org/10.5281/zenodo.10006435>

Abstract: Pedagogical Educational Technology (PET) has become an integral component of modern education systems, revolutionizing the teaching and learning processes. This abstract provides an overview of the essence, characteristics, and efficiency of PET. The essence of PET lies in its amalgamation of pedagogical principles and cutting-edge technological tools, enabling a dynamic and interactive learning environment. Its characteristics encompass adaptability, engagement, accessibility, and personalized learning experiences. The efficiency of PET is evident in its ability to enhance student performance, improve teacher effectiveness, and foster 21st-century skills acquisition. This paper explores the multifaceted facets of PED, shedding light on its transformative potential in education.

Keywords: Pedagogical Educational Technology (PET), Essence of PET, Characteristics of PET, Efficiency of PET, Technology in Education, Interactive Learning, Personalized Learning, 21st-Century Skills, Educational Transformation, Teaching and Learning Enhancement.

The increasing requirements for the professional training of future specialists are associated with an increase in the tasks and programs of the socio-economic development of Russia at the present stage, an increase in the volume of information and the improvement of socio-cultural and economic relations. At the same time, the contradiction between the growing needs and the existing practice of teaching university students is intensifying; new trends in higher education, requirements for the learning process in accordance with standards, curricula and the uncertainty of choosing the paths of the most effective learning. The way out of this situation is the use of pedagogical technologies developed by modern pedagogical science. These objective requirements for the level of effectiveness of educational activities in higher education determined the choice and relevance of the topic of this article: "Pedagogical teaching technologies: essence, their characteristics and effectiveness."

The term "technology" came to pedagogy from the industrial sphere and is becoming more and more legitimate. The definition of this concept is varied





depending on the authors' understanding of the structure of the educational technological process and its constituent elements. The variety of approaches to the classification of technologies is due to their complexity and multidimensionality, since technology is also the logic of the educational process, carried out in different types of pedagogical activities; This is both skill and a set of techniques and methods of teaching that ensure high efficiency of the educational process. The general goal of pedagogical technology is to solve didactic problems in managing the educational process with precisely defined goals, the achievement of which must be clearly described and defined. V. P. Bespalko defined technology as "the systematic and consistent implementation in practice of a pre-designed educational process," that is, technology is "a project of a specific pedagogical system implemented in practice".¹

D. V. Chernilevsky gives the following definition: "teaching technology is a system category focused on the didactic application of scientific knowledge, scientific approaches to the analysis and organization of the educational process, taking into account the empirical innovations of teachers and the focus of this process on achieving high results in the development of students' personalities." , highlighting the structural components of this system: "learning goals, learning content, means of pedagogical interaction, including motivation and means of teaching, organization of the educational process, student, teacher, result of activity (including the level of professional training)." ²Together with O. N. Filatov, he also gives the following definition of educational technology: "technology is a systemic complex of psychological and pedagogical procedures, including a special selection and arrangement of didactic forms, methods, methods, techniques and conditions necessary for the implementation of the learning process".³

V. A. Yakunin writes that "pedagogical technology represents the unity of the main functions, successively and cyclically changing during the planning, organization and conduct of the learning process. Pedagogical technology includes the following functions: diagnostics, goal setting, information, forecasting, design (planning), decision making, organizing execution, communication, control and correction with the leading role of goal setting."⁴ L. M. Nikonorova notes that pedagogical technologies are used, among other

¹ Беспалько, В. П. Педагогика и прогрессивные технологии обучения / В. П. Беспалько. - М.: Изд-во Института профессионального образования МО России, 1995. - 342 с.

² Загрекова, Л. В. Теория и технология обучения / Л. В. Загрекова. - М.: Высшая школа, 2004. - 156с.

³ Кузьмина, М. С., Капичникова О.Б. Модернизация обучения иностранным языкам в вузе / М. С. Кузьмина - Балашов: Изд-во «Николаев», 2002. - 98 с.

⁴ Якунин, В. А. Педагогическая психология / В. А. Якунин. ~ СПб., 1998. -231 с.





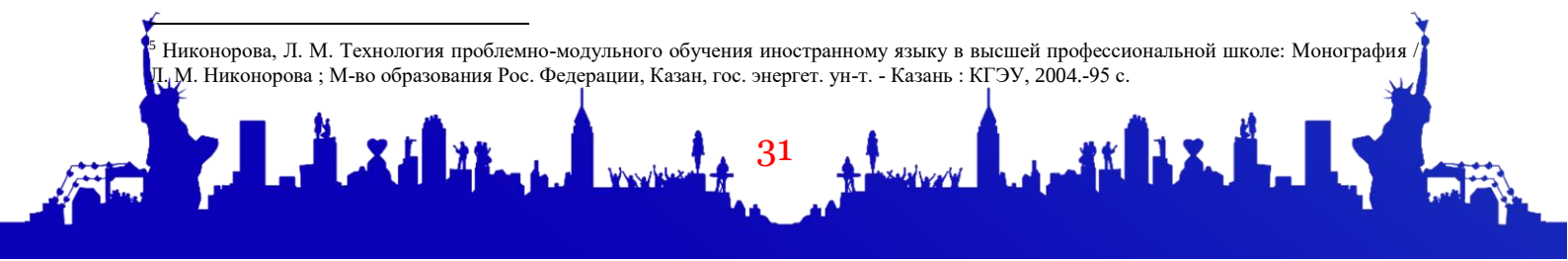
things, to “use the potential of various disciplines collaborating with pedagogical science”, “increase the effectiveness of teaching” and “bring all students to a single, pre-planned level of knowledge and skills”.⁵

L. V. Zagrekova considers the main directions of technologization of the educational process at the present stage of development of pedagogical science to be the following: “cybernetic aspect (improving the management of the acquisition of knowledge, skills, abilities); communicative aspect (improving the ways and directions of information exchange between subjects of the educational process); information aspect (improvement and reconstruction of the content of education); activity aspect (activation and intensification of students’ activities); personal aspect (taking into account and developing the personal qualities of subjects of educational activities).”

Thus, pedagogical technology represents the unity of the main functions, successively and cyclically changing in the planning, organization and conduct of the learning process. Pedagogical technology includes the following functions: diagnostics, goal setting, information, forecasting, design (planning), decision making, organization of execution, communication, control and correction with the leading role of goal setting. The common features of technologies are “processuality, focus on the design and use of effective and economical processes, as well as representability by a set of methods for changing the state of an object”; “specific features are varied: diagnostic targeting, efficiency, algorithmability, effectiveness, integrity; guarantee of achieving the set goals”; “projectability, adjustability, controllability, visualization”.

G. K. Selevko characterized pedagogical technologies according to the following parameters: “level of application, philosophical basis, leading factor of mental development, scientific concept of learning experience, focus on personal structures, nature of the content and structure of technology, type of organization and management of cognitive activity, according to organizational factors , according to the approach to the child, according to the prevailing (dominant) method, in the direction of modernizing the existing traditional system, according to the category of students,” namely, “pedagogical technologies based on the personal orientation of the pedagogical process (pedagogy of cooperation), based on the activation and intensification of students’ activities (problematic , game learning) based on the effectiveness of management and organization of the educational process, private pedagogical,

⁵ Никонорова, Л. М. Технология проблемно-модульного обучения иностранному языку в высшей профессиональной школе: Монография / Л. М. Никонорова ; М-во образования Рос. Федерации, Казан, гос. энергет. ун-т. - Казань : КГЭУ, 2004.-95 с.





natural, developmental learning technologies.” N.V. Bordovskaya and A.A. Rean offer the following characteristics of technologies: “structural-logical, gaming, computer, dialogue, training technologies”.⁶

D. V. Chernilevsky presents such characteristics of technologies as problem-based learning, concentrated, modular learning, and developmental learning, differentiated, active (contextual), game learning. Problem-based learning has the goal of “developing cognitive activity and creative independence of students; essence - consistent and purposeful presentation of cognitive tasks to the learner, by solving which the learner actively acquires knowledge; mechanism - search methods, formulation of cognitive tasks.” Concentrated training is aimed at creating “a structure of the educational process that is as close as possible to the natural psychological characteristics of human perception; in-depth study of subjects by combining classes into blocks; teaching methods that take into account the dynamics of student work.”

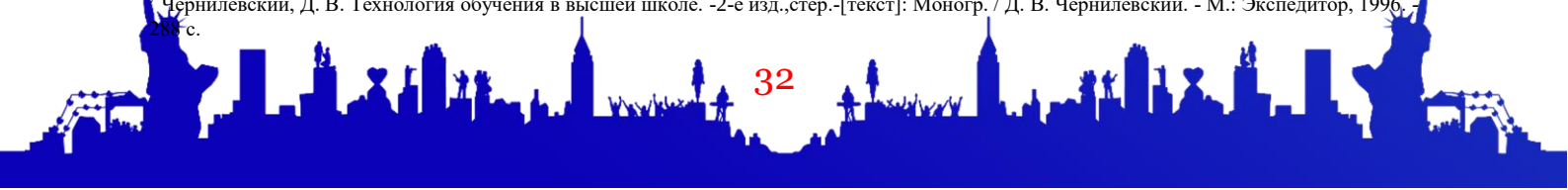
The purpose of modular training is “to ensure flexibility of training, adaptation to the individual needs of the individual, the level of his basic training; independent work of students with an individual curriculum; problem-based approach, individual pace of learning.” The purpose of developmental education is “the development of the individual and his abilities; orientation of the educational process towards human potential and their implementation; involving students in various types of activities.” Differentiated learning is “creating optimal conditions for identifying inclinations, developing interests and abilities; mastering program material at various planned levels, but not lower than mandatory (standard); methods of individual training.”

Active (contextual) learning implies “organizing the activity of students; modeling the subject and social content of future professional activity; active learning methods.” Game-based learning means “ensuring personal and activity-based character, assimilation of knowledge, skills and abilities; independent cognitive activity aimed at searching, processing, and assimilating educational information; game methods of involving students in creative activities”.⁷

The increasingly widespread use of pedagogical technologies by teachers is due to modern trends in the development of higher education: the development of creative abilities, mastery of methods of cognition, stimulation of self-education and creativity, improvement of the professional qualities of a future specialist, i.e. the desire to increase the efficiency of the learning process.

⁶ Кузьмина, М. С., Капичникова О.Б. Модернизация обучения иностранным языкам в вузе / М. С. Кузьмина - Балашов: Изд-во «Николаев», 2002. - 98 с.

⁷ Чернилевский, Д. В. Технология обучения в высшей школе. -2-е изд.,стер.-[текст]: Моногр. / Д. В. Чернилевский. - М.: Экспедитор, 1996. - 288 с.





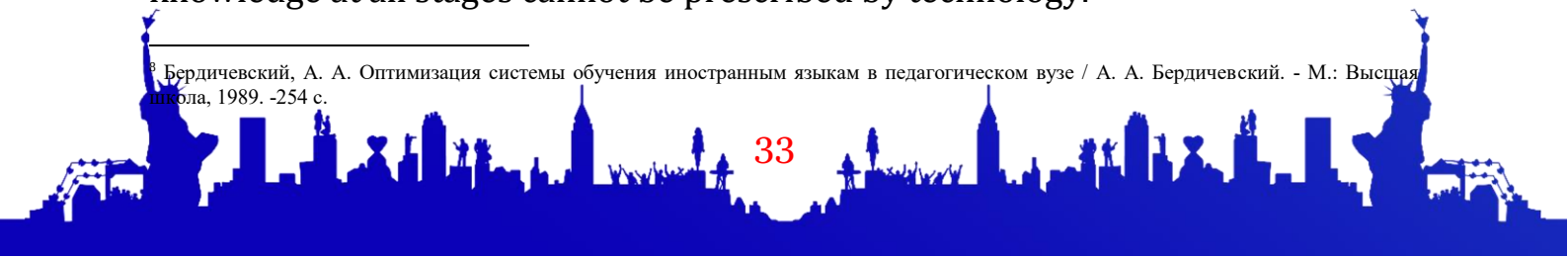
Efficiency is one of the most important characteristics of educational technology, because instructional technology involves a holistic process of goal setting, continually updating curricula and programs, testing alternative strategies and curricula, evaluating teaching systems as a whole, and re-setting goals as new information about the system's effectiveness becomes known.

The term “efficiency” entered pedagogy from other areas of knowledge. Research was carried out by such scientists as M. I. Makhmutov, Yu. K. Babansky, A. A. Berdichevsky, V. P. Bespalko, V. M. Blinov, A. A. Verbitsky, M. S. Kuzmina. Gradually, the meaning of this concept transformed from improving learning to a concept characterizing its special quality. A. A. Berdichevsky gives the following definition of efficiency: “this is an indicator characterizing the satisfaction of all the needs of society by a given system”, “the most important criterion for optimality and quality”. B. M. Blinov defines efficiency as “an indicator of how, in the process of educational activity, specific results are transformed into results that have social significance”.⁸

There are two main areas of research into the effectiveness of teaching: a) identifying means of increasing the effectiveness of the pedagogical process; b) quantitative effectiveness research. The need to improve the quality of education through the use of a set of effective forms, methods and means is emphasized in the works of M. I. Makhmutov, Yu. K. Babansky, who followed the first direction of research. An analysis of the scientific literature showed that the second direction is the subject of attention of a larger number of researchers (V.P. Bespalko, A.A. Berdichevsky, V.V. Kraevsky). According to the theory of V.P. Bespalko, effectiveness is determined by measuring the quality of acquired knowledge. At the same time, the need for a more accurate description and measurement of the process of assimilation is emphasized as an externally controlled fact of the didactic process, as the very content of the didactic process and as the cognitive activity of the student aimed at assimilation of knowledge.

Speaking about the degree of effectiveness, of course, one cannot underestimate the disadvantages that sometimes arise when using educational technologies. For example, this is a clearly defined orientation of learning towards the final result, which to some extent leads to a decrease in the pedagogical potential of learning. It is also important that the focus of attention shifts from the specific student to the learning process. Not all stages of the learning process can be controlled; for example, the process of acquiring knowledge at all stages cannot be prescribed by technology.

⁸ Бердичевский, А. А. Оптимизация системы обучения иностранным языкам в педагогическом вузе / А. А. Бердичевский. - М.: Высшая школа, 1989. -254 с.





The teacher's desire to overcome these shortcomings in the use of pedagogical technologies is the key to successful, effective teaching and the gradual development and improvement of pedagogical science as a whole. At the same time, it is important to emphasize the need for constant monitoring by the teacher himself of the specified parameters of the degree of effectiveness of the pedagogical technology he uses in the learning process, even in a specific group of students. One of the possible options to help the teacher avoid at least part of these shortcomings when using pedagogical technologies, as well as to intensify learning, teach students to creatively apply acquired knowledge in a real situation, is the use of pedagogical conditions that make it possible to increase the efficiency of the learning process.

According to our analysis of the degree of effectiveness (quantitative study of the effectiveness) of pedagogical technologies most often used in higher education, we can conclude that the most effective of the technologies used are pedagogical technologies on a modular basis, based on the use of a computer, project-based learning, training in cooperation; for the most part, they are personality-oriented technologies on a communicative basis, since they are based on a system of interrelated principles, and one of the main principles is a personal approach, which develops a system of student personal qualities that stimulate the desire to learn independently, motivation (the principles of situationality and modeling, orientation to group communication and professional orientation). We adhere to the opinion of V.V. Serikov, who considers the learning situation to be the basis of personality-oriented learning, the construction of which requires the use of a number of technologies:

- technology of educational dialogue, which involves the assimilation of content in the conditions of dialogue, providing subject-meaningful communication, self-realization of the individual;
- technology of a given approach, representing elements of educational content in the form of multi-level personality-oriented tasks;
- technology of simulation games, including imitation of social-role and spatio-temporal conditions that ensure the implementation of personal functions in a situation of internal conflict and competition".⁹ Our task is to develop pedagogical conditions that increase the effectiveness of learning using student-oriented technologies, taking into account the characteristics of teaching a foreign language at a technical university. Thus, we can conclude that pedagogical technologies have quite firmly taken their place in pedagogical

⁹ Кузьмина, М. С., Капичникова О.Б. Модернизация обучения иностранным языкам в вузе / М. С. Кузьмина - Балашов: Изд-во «Николаев», 2002. - 98 с.

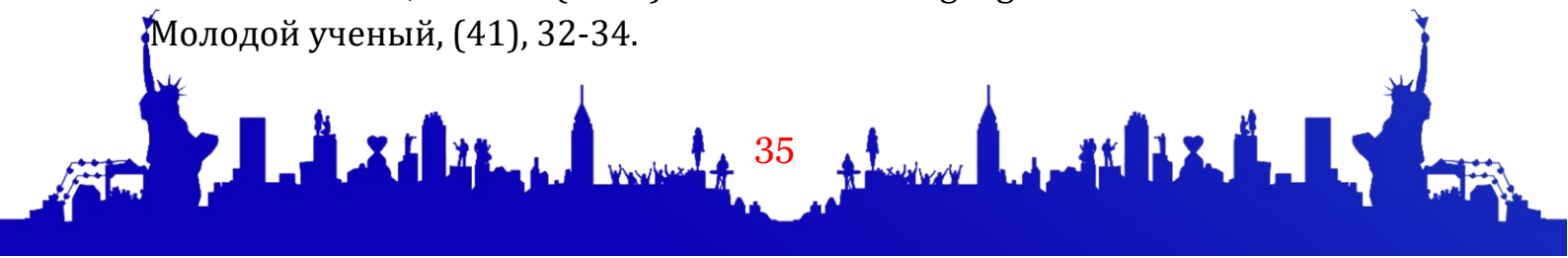




theory and practice, their characteristics and methodological recommendations have been developed, the use of which, taking into account certain pedagogical conditions, significantly increases the effectiveness of the learning process as a whole.

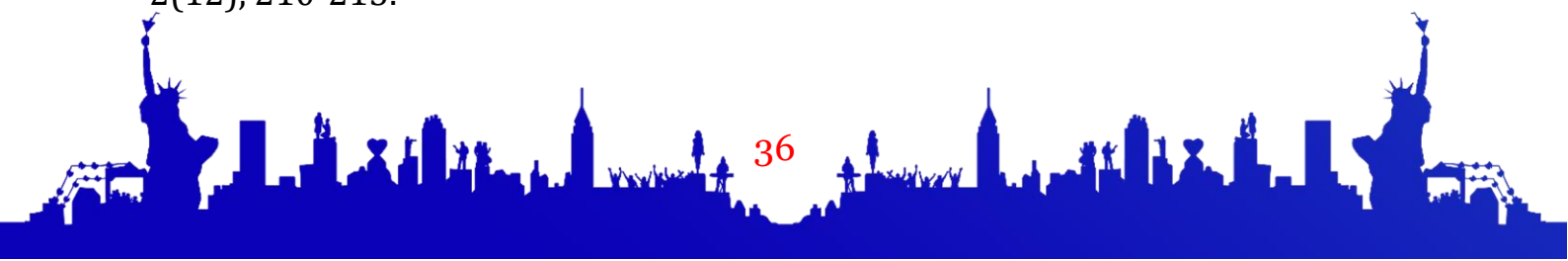
References:

1. Obidovna, D. Z. (2022). GENDER DIFFERENTIATION OF MASCULINE AND FEMININE VERBALIZATION. *European International Journal of Multidisciplinary Research and Management Studies*, 2(05), 59-65.
2. Djalilova, Z. O. (2021). Studies on gender linguistics in the field of Uzbek language. *Academic research in educational sciences*, 2(3), 391-397.
3. Obidovna, D. Z., & Denis, S. (2021). Formulas of speech etiquette in a gender-engineered communication strategy. *Central asian journal of theoretical & applied sciences*, 2(6), 5-11.
4. Obidovna, D. Z. (2021). Comparative Analysis Of Uzbek Men's And Women's Speech Through The Prism Of Gender Linguistics. *Central Asian journal of literature, philosophy and culture*, 2(2), 22-26.
5. Obidovna, D. Z. (2022). Speech Behavior and its Gender Specificity on the Basis of the Main English Language Variants. *Middle European Scientific Bulletin*, 22, 199-205.
6. Obidovna, D. Z. (2021). Gender issues in foreign theoretical linguistics: concerning the history of the issue. *Gender issues*, 7(6).
7. JALILOVA, Z. O. (2021, March). ON THE FORMATION OF THE LANGUAGE OF SCIENTIFIC LITERATURE IN THE HISTORY OF THE ENGLISH LANGUAGE. In *E-Conference Globe* (pp. 18-22).
8. Jalilova, Z. O. (2020). Concerning the issue of terms, having a place with various morphological classes (in view of the example of the terminological arrangement of social action). *Новый день в медицине*, (4), 501-503.
9. Djalilova, Z. O., Juraev, S. S., & Kosimov, S. M. (2021). LATIN AS A PROFESSIONAL LANGUAGE OF MEDICAL WORKERS. *Международный научно-практический электронный журнал «МОЯ ПРОФЕССИОНАЛЬНАЯ КАРЬЕРА»*. Выпуск № 23 (том 1)(апрель, 2021). Дата выхода в свет: 30.04. 2021., 79.
10. Джаилова, З. О., Хасанов, К. А., & Султонов, А. А. (2021). Роль научного управления в процессе обучения высококвалифицированных врачей в новом Узбекистане. *Молодой ученый*, (26), 377-379.
11. Dzhalilova, Z. O. (2021). The Latin language's international status. *Молодой ученый*, (41), 32-34.



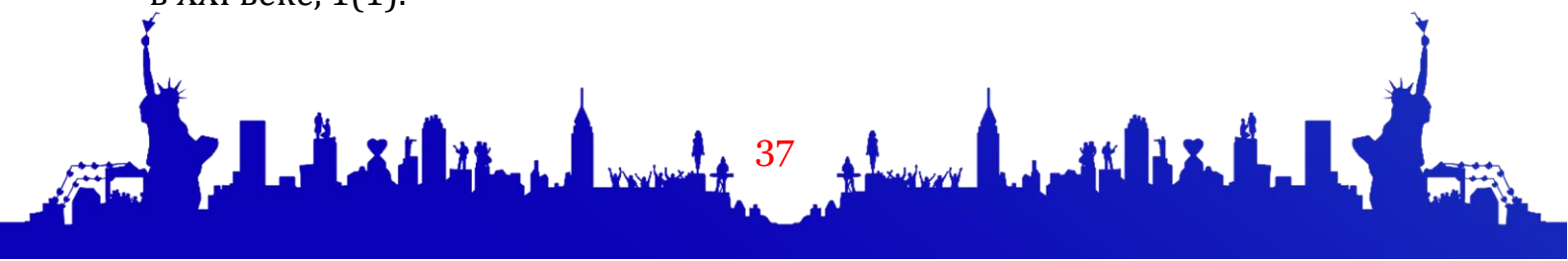


12. Dzhaliilova, Z. O., & Mirfajziev, K. (2021). Latin as the language of medicine. Молодой ученый, (41), 35-37.
13. Dzhaliilova, Z. O., Izomova, S. G., & Ahmedova, G. A. (2021). Intercultural communication and the Latin language. Молодой ученый, (24), 398-400.
14. Dzhaliilova, Z. O. (2021). History of formation of Latin language. Молодой ученый, (41), 34-35.
15. Obidovna, D. Z. (2022). GENDER SPEECH BEHAVIOR IN THE CONTEXT OF THE SOCIO-LINGUISTIC FACTOR. Web of Scientist: International Scientific Research Journal, 3(6), 190-198.
16. Dzhaliilova, Z. O., Hajdarova, N. S., & Tashpulatova, N. A. (2021). Latin in the Contemporary World. Молодой ученый, (24), 400-402.
17. Djalilova, Z. (2022). POLITENESS IN WOMEN'S DISCOURSE IN ENGLISH AND UZBEK LANGUAGES. Academic research in modern science, 1(11), 29-34.
18. Джалилова, З. (2022). РЕАЛИЗАЦИЯ МАКСИМ ВЕЖЛИВОСТИ В АНГЛИЙСКОМ И УЗБЕКСКОМ ДИАЛОГАХ. Zamonaviy dunyoda innovatsion tadqiqotlar: Nazariya va amaliyot, 1(21), 22-33.
19. Obidovna, D. Z. (2022). A Speech Etiquette Formula for the Gender Communication Strategy. American Journal of Social and Humanitarian Research, 3(10), 44-50.
20. Djalilova, Z. (2022). DISCURSIVE ELEMENTS AND THE CATEGORY OF POLITENESS. Academic research in modern science, 1(12), 8-14.
21. Джалилова, З. О. (2022). НУТҚ ҲАРАКАТЛАРИДА ХУШМУОМАЛАЛИКНИНГ ГЕНДЕР ХУСУСИЯТЛАРИ. МЕЖДУНАРОДНЫЙ ЖУРНАЛ ИСКУССТВО СЛОВА, 5(5).
22. Obidovna, D. Z. (2022). DISTINCTIVE FEATURES OF MALE AND FEMALE ORAL SPEECH IN MODERN ENGLISH. International Journal Of Literature And Languages, 2(10), 14-21.
23. Obidovna, D. Z. (2022). THE MAIN CONCEPTS OF POLITENESS IN MODERN LINGUOPRAGMATICS: THE POLITENESS PRINCIPLE BY J. LEECH. International Journal of Pedagogics, 2(11), 15-20.
24. Djalilova, Z. (2022). GENDER DIFFERENTIATION OF DISCOURSE ELEMENTS AS INDICATORS OF POSITIVE AND NEGATIVE EVALUATIONS. International Bulletin of Applied Science and Technology, 2(12), 55-63.
25. Djalilova, Z. (2022). GENDER-DETERMINED DIFFERENCES IN THE SPEECH OF LITERARY CHARACTERS. Eurasian Journal of Academic Research, 2(12), 210-215.





26. Djalilova, Z. (2022). GENDER ELEMENT OF SPEECH BEHAVIOR FROM THE POSITION OF TEXT ORGANIZATION MECHANISMS. Eurasian Journal of Academic Research, 2(13), 274-281.
27. Джалилова, З. (2022). ПРАГМАТИЧЕСКИЙ ВЗГЛЯД НА МЕЖЛИЧНОСТНОЕ ОБЩЕНИЕ. Zamonaviy dunyoda ilm-fan va texnologiya, 1(7), 331-336.
28. Djalilova, Z. (2022). GENDER XUSHMUOMALALIKKA ASOSLANGAN IBORALARNING SHAKLLANISHI. Zamonaviy dunyoda innovatsion tadqiqotlar: Nazariya va amaliyot, 1(28), 303-308.
29. DZHALILOVA, Z. O., & SHARIPOV, A. G. ALPHABET OF LATIN LANGUAGE. МОЛОДОЙ УЧЕНЫЙ Учредители: ООО" Издательство Молодой ученый", (52), 338-339.
30. DZHALILOVA, Z. O., & UBAJDULLOEV, A. U. U. COMPARISON DEGREES OF ADJECTIVES IN LATIN LANGUAGE. МОЛОДОЙ УЧЕНЫЙ Учредители: ООО" Издательство Молодой ученый", (52), 336-338.
31. DZHALILOVA, Z. O., & JAKUBOV, U. S. NUMBERS IN LATIN LANGUAGE. МОЛОДОЙ УЧЕНЫЙ Учредители: ООО" Издательство Молодой ученый", (52), 339-341.
32. DZHALILOVA, Z. O., & ALIEV, M. N. ADJECTIVE IN LATIN LANGUAGE. МОЛОДОЙ УЧЕНЫЙ Учредители: ООО" Издательство Молодой ученый", (52), 332-334.
33. DZHALILOVA, Z. O., & ALIEV, M. N. PRONOUNS IN LATIN LANGUAGE. МОЛОДОЙ УЧЕНЫЙ Учредители: ООО" Издательство Молодой ученый", (52), 334-336.
34. DJALILOVA, Z. O., & KHAYOTOV, K. M. K. U. LATIN PRONOUNS. МОЛОДОЙ УЧЕНЫЙ Учредители: ООО" Издательство Молодой ученый", (53), 257-258.
35. DJALILOVA, Z. O., & KHAYOTOV, M. K. U. VERBS IN LATIN LANGUAGE. МОЛОДОЙ УЧЕНЫЙ Учредители: ООО" Издательство Молодой ученый", (53), 255-257.
36. Djalilova, Z. O. (2023). A DISCOURSIIVE TURN IN THE THEORY OF LINGUISTIC POLITENESS: TO THE FORMATION OF THE THEORY OF LINGUISTIC IMPOLITENESS. International Journal Of Literature And Languages, 3(02), 15-23.
37. Джалилова, З. (2023). The notion of illocution in the theory of speech acts by John Austin. Современные тенденции при обучении иностранному языку в XXI веке, 1(1).





38. Zayniddinovna, T. N. (2021). The Image of the Eastern Ruler in the Works of Christopher Marlowe. Central Asian Journal Of Social Sciences And History, 2(10), 10-14.
39. Zayniddinovna, T. N. (2022). The Problem of "A Strong Personality" in Shakespeare'Dramas: Richard III and Macbeth. Middle European Scientific Bulletin, 20, 7-10.
40. Zaynitdinovna, T. N. (2022). Lyrical Dialogue in Shakespeare's Poems as a Reflection of Renaissance Anthropocentrism and a Strong Personality. Middle European Scientific Bulletin, 21, 120-125.
41. Ташева, Н. З. (2022). КРИСТОФЕР МАРЛОУ (ЛИТЕРАТУРНЫЙ АНАЛИЗ): ТАМЕРЛЕН ВЕЛИКИЙ КАК ТИП ЛИЧНОСТИ ВОСТОЧНОГО ПРАВИТЕЛЯ. Eurasian Journal of Academic Research, 2(2), 234-239.
42. Zayniddinovna, T. N. (2022). THE CHARACTER OF STRONG PERSONALITY ACCORDINGLY WITH EASTERN THEMATICS IN CHRISTOPHER MARLOWE'S PLAY" TAMBURLAINE THE GREAT". International Journal Of Literature And Languages, 2(08), 9-14.
43. Zayniddinovna, T. N. (2022). STRONG PERSONALITY'S ARTISTIC AND POETIC REFLECTION IN THE RENAISSANCE EPOCH. International Journal Of Literature And Languages, 2(11), 43-51.
44. nafisa Zayniddinovna, T. (2022). Lexico-Semantic Word Production as a Way of Forming Theater Terminology of the English Language. American Journal of Social and Humanitarian Research, 3(10), 144-150.
45. Zayniddinovn, T. N., & Sharofiddinovich, S. S. (2021). General cultural and educational values of ancient-classic latin language. Central Asian Journal of Theoretical and Applied Science, 2(5), 77-80.
46. Zayniddinovna, T. N. (2023). CHARACTERIZATION OF THE IMAGE OF AMIR TEMUR IN CHRISTOPHER MARLOWE'S DRAMA" TAMERLANE THE GREAT". International Journal Of Literature And Languages, 3(02), 36-43.

