Foydalanilgan adabiyotlar

1.Saidova, S. Y. (2021). A study regarding revealing echocardiographic and anthropometric changes in children from birth to 3 years old with congenital heart defects. ACADEMICIA: An International Multidisciplinary Research Journal, 11(10), 395-399.

2. Saidova, S. Y. (2021). Revealing echocardiographic and anthropometric changes in children from birth to 3 years old with congenital heart defects. ACADEMICIA: An International Multidisciplinary Research Journal, 11(9), 1071-1075.

3.Saidova, S. Y. (2022). Echocardiographic and Anthropometric Analyzes of Children Born with Tetrad of Fallot. Central Asian Journal of Literature, Philosophy and Culture, 3(11), 369-373.

4.Yuldashevna, S. S. (2022). Analysis of Factors for the Occurrence Congenital Heart Defects in Children. Miasto Przyszłości, 24, 179-181.

5. Саидова, С. (2021). Выявление антропометрических изменений у детей от рождения до 3-х лет с врожденными пороками сердца. Общество и инновации, 2(2/S), 447-454.

6. Саидова, С. (2021). Юрак туғма нуқсонлари билан янги туғилгандан 3 ёшгача булган болаларда антропометрик ўзгаришларни аниқлаш. Общество и инновации, 2(2/S), 439-445.

7.Хамидова Н.К., Тешаев Ш.Ж. Сравнительная характеристика антропометрических параметров детей с различными пороками сердца // Самарканд Проблемы биологии и медицины, 2019. № 4.

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INNOVATIVE TECHNOLOGIES IN TEACHING MEDICAL BIOLOGY

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Resume: The article discusses innovative technologies that are used in the process of teaching the subject of Medical Biology and General Genetics at the Department of Medical Biology. The introduction of modern technologies leads to increased student interest, motivation to learn, development of practical skills, clinical thinking, and promotion of the development of core competencies carried out in the Module program in the subject.

Key words: credit education system, specialties, motivation for innovative teaching methods, anthropogenetics, karyotyping, logical thinking, clinical thinking.

Introduction: Teaching students to independently actively master the system of general and special competencies, the accumulation of creative experience and the creation of their own portfolio is important in the transition to a credit system of education, therefore it is important to teach students logical and clinical thinking. For the development of professional skills, it is necessary to introduce such technologies that would provide the necessary level of training in specific academic disciplines and would contribute to the development of professional skills, motivation for future professional activity.

Medical biology and general genetics occupies a special place among the fundamental biological disciplines in a medical university. It is impossible to understand the essence of life and the main properties of living matter (self-renewal, self-reproduction and self-regulation) regardless of the level of its organization without studying the laws of heredity and variability universal for all living beings. Genes control the matrix processes of DNA replication and protein biosynthesis in the cell. Proteins determine all the properties of cells, including their ability to interact with each other directly or indirectly, through the internal environment of the body. Cell interactions ultimately determine the phenotype. Consequently, the general state of the organism, its morphophysiological characteristics, health and disease at any given moment is the result of the interaction of the genotype of the organism with environmental conditions.

Materials and methods. The constant introduction of new technologies will make it possible to train a professional - a specialist with a stock of well-formed skills, capable of thinking clinically, making a qualified diagnosis and prescribing treatment, solving professional tasks.

To achieve this task, the training sessions are arranged as follows: after theoretical classes, a course of lectures is followed by a practical one, where students, according to the purpose of the lesson, are offered tasks to solve:

1. problematic issues that require an answer to it through thinking;
2. situational tasks;
3. modeling of biological processes;
4. analysis of situational tasks;
5. business games;
6. role-playing games;

7. scientific and practical conference;

8. debate;

9.Case methods -Case based Learning. This is a research approach that is used for a deep and multifaceted understanding of a complex problem in the context of real life.

The methods complement traditional teaching methods, increases motivation for learning, which becomes interesting, develops a correct and holistic view of the biological processes taking place in the body, starting from the molecular to the organizational level.

For example, in the lesson "Organization of hereditary material in non-cellular forms, prokaryotic and eukaryotic cells", students simulate the levels of compaction of DNA molecules and proteins from wire material, solving situational problems about possible ways of packaging genetic material. Creating a DNA model in the classroom in combination with the learning process is a great way to learn more about how this molecule forms our genes.

In the lesson on the topic "Methods of medical genetics - cytogenetic method", the method of team play is used, where students are divided into 4-5 teams and perform practical tasks on karyotyping, determination of sexual chromatin, viewing micro-preparations of metaphase plates, cut out chromosomes and distribute sequentially according to the Denver classification, then present their work, as a result of which a discussion takes place, additions and conclusions are made independently.

At the practical lesson on the topic "Hereditary diseases: inheritance of gene diseases", the method of role-playing is used. Students are offered the roles of ecologist, virologist, geneticist, nutritionist, oncologist, molecular biologist, who during the game should comprehensively consider the molecular genetic mechanisms of the occurrence of hereditary diseases.

The situational analysis method (case method) is considered one of the promising innovative technologies. The essence of the situational analysis method is not so much in obtaining new knowledge, as in the formation of professional competence, thinking skills, comprehension of a real life situation, the description of which simultaneously reflects not only any clinical problem, but also actualizes a certain set of knowledge that needs to be learned when solving this problem. This method is successfully used in the lesson on the second topic "Hereditary diseases - inheritance of chromosomal diseases". I.P. Pavlov said: "Our doctors should know the laws of heredity like an alphabet. The realization of the scientific truth about the laws of heredity will help to save humanity from

many sorrows and upsets." The purpose of the lesson is to develop practical skills of behavior in some critical situations that a doctor may encounter in the course of his professional activity. Students are divided into groups of students (each group gets a task):

Genetics – to get acquainted with hereditary human diseases.

Historians – to get acquainted with the science of eugenics.

Correspondents - to study the attitude of society towards people with hereditary diseases.

Doctors – to study measures for the prevention of hereditary diseases.

Doctors will help the family in making a decision about planning the unborn child. The doctor provides information about the nature of the disease and the magnitude of the repeated risk for the patient's relatives, recommends possible additional preventive measures, for example, the elimination of occupational or household hazards, dispensary observation with an increased hereditary predisposition to diseases that manifest themselves later in life

Usually, students express a large number of hypotheses to solve this problem. The next stage is the analysis of the versions expressed and the collective development of a strategy for the behavior of a doctor in such clinical situations. In the process of a comprehensive analysis of the situation, students develop the ability to apply all previous knowledge to solve the problem, clinical thinking, practical skills, develop communication skills to communicate with the patient, relatives of the patient, and so on.

Students show great interest in the lesson on human ecology, which is held in the form of press conferences. Students, as representatives of various specialties, answer questions from "journalists" on the topic of the lesson. Then the students switch roles and, in conclusion, there is a discussion of the topic together with the teacher. Conclusions are drawn on the topic under discussion. The teacher gives an assessment to each student, also the students themselves evaluate each other and in general a press conference.

And in the section of medical genetics, a lesson on the topic "Ontophylogenesis of organ systems" teams of students compete in the knowledge of anatomy. It is taken into account that a person, a creature of animal origin, and those complex structures with which a doctor deals are the result of a long historical development of ancestors.

Results and discussion: Global trends in the development of education are the introduction of a competence-based approach,

informatization, internationalization, globalization and diversification of education. The teacher subjectively decides on the design of the content, methods, strategies and technologies of teaching, but the implementation of educational reforms depends on him. Subjectivity of consciousness and professional activity is one of the principles of modern pedagogical science. That is, the use or non-use of innovative methods depends on the personality of the teacher, his methodological competence, pedagogical skills. The task of the teacher training system is to actualize such a need, to form methodological competence. The task of a higher educational institution is to encourage and stimulate the development of the creative potential of a teacher and a student. An important task of the teacher is the constant rethinking and development of his pedagogical potential; then the student, under the influence of the teacher's example, will be an active and competent person.

Conclusion: In medical education, theoretical knowledge alone is not enough to create a better system of medical care. Traditional didactic teaching, that is, the unidirectional flow of knowledge from teacher to student, is no longer considered an effective method of increasing competence to improve the relationship between doctor and patient. Modern teaching methodologies that emphasize "interactivity", such as problem-based learning, role-playing and debate, have been shown to provide a more effective framework for improving competence in providing medical care. If initially the approach to the study of medical biology in higher education institutions was subject-oriented, that is, priority was given to high-quality communication of information, then today, competently compiled practical classes using personality-oriented innovative techniques further increase students' interest in the subject and profession as a whole. Thus, the introduction of innovative teaching technologies contributes to the development of core competencies adopted in the Curriculum Module. search for new teaching technologies for the purpose of the best assimilation of educational material by students

REFERENCES.

1. Medical Education module of Bukhara State Institute-Bukhara 2023

2. Artyakhina A.I., Hetman N.A. Golubchikova M.D. and others. Competently-oriented training in the medical language.//Carefully-methodical tool. Omsk:"Printing center of KAN".- 2012. - 198 P.

3. Konopleva A.I. An approximate model of training a medical specialist / / Moscow: Higher education in Russia. - 2010. - No. 1. - S 98-101.

4. Panfilova A.P. Innovative pedagogical technologies: active learning// Study guide DLI Stud. universities. - M.: - 2009. -192 p.

5. Shamov I.A., Gadzhiev G.E. Business game in a medical university.// Message for prepodavateley. - Makhachkala: CPI DGMA.- 2008. - 56 p.

6. Golubchikova. M.D. Case technologies in the training of doctors and pharmacists: an educational place // - Irkutsk: RIO IGIUVa, 2017.

7. Taubaeva Sh.T., Laktionova S.N. Pedagogical innovations as theory and practice of innovations in the education system. Almaty: Pollen; 2001. p.216

8. Deridzhan I., Valchev G. The results of the methodology of teaching a consistent student audit. In: Yearbook of the Burgas Free University. Burgas: BRU; 2015. p. 165

9. Mirzoeva, M. A. (2023). Methods for the Systematic Formation of Biology Teachers as Specialists. Web of Synergy: International Interdisciplinary Research Journal, 2(2), 131-134.

10. Preparation and training for the established will be: the application of innovative methods. UNESCO; 2016. Available at: htp: //www.unesco.org/education/tlsf/mods/theme_d .html [Accessed 2016-02-12].

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EPIZOOTOLOGICAL AND EPIDEMIOLOGICAL FEATURES OF LISTERIOSIS, GENERAL AND SPECIFIC PREVENTION IN ANIMALS AND HUMANS.

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Epidemiological and epizootic surveillance of listeriosis remains an urgent problem. Listeriosis refers to diseases characterized by polymorphism of clinical manifestations, a variety of variants of the course and outcomes of the disease. The incidence of listeriosis is low, however, given the severity of clinical manifestations and high mortality in large foci (20-40%), this infection is controlled by the World Health Organization. Listeriosis has turned from diseases that are more often registered mainly among animals and less often among people in rural areas into one of the most significant food-borne zooanroponotic diseases in the world. It has been described the peculiarities o f listeriosis, its causes in animals and humans, diagnostic methods, prevention and eradication ways.