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| ISRA (India) | = 4.971 | SIS (USA) | = 0.912 | ICV (Poland) | = 6.630 |
| ISI (Dubai, UAE) | = 0.829 | РИНЦ (Russia) | = 0.126 | PIF (India) | = 1.940 |
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# POSSIBILITIES OF USING PEDAGOGICAL TECHNOLOGIES IN THE PROCESS OF TEACHING THE COURSE OF "ANATOMY AND HUMAN PHYSIOLOGY" IN HIGHER EDUCATIONAL INSTITUTIONS

***Abstract***: *In this paper, it is shown that the use of a variety of innovative pedagogical technologies can improve the quality of training, as well as students' interest in the subject.*

***Key words***: *innovative technologies, pedagogical technologies, process, student, quality training.*

***Language***: *English*

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## Introduction

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The implementation of the National Program on training cadres provides for a radical reform of the structure and content of continuous education. A special place in the system of continuous education is higher education. One of the defining tasks of higher education is to ensure highly effective education and training of qualified personnel on the basis of modern educational - professional programs.

Innovations are characteristic of each professional activity of a person and therefore become the subject of study, analysis and implementation naturally. Innovations themselves do not arise; they are the results of scientific research, the advanced pedagogical experience of individual teachers and entire collectives. This process cannot be spontaneous and it needs to be controlled.

With the introduction of modern technologies of pedagogic to the educational-upbringing process, all more master the functions of a consultant, adviser and educator. This requires special psychological and pedagogical training from them, since not only special, subject knowledge, but also modern knowledge in the field of pedagogy and psychology, technology of training and education are implemented in the activity. On this basis, a readiness for the perception, evaluation and implementation of pedagogical innovations is formed [1,3]. The discipline of human anatomy and physiologists occupies a significant place in the higher education system, not only in the training of students of medical universities and physical education departments. Of particular importance is the knowledge of anatomy and physiology by bachelors studying in the direction "Methodology of Teaching Biology". Teaching such disciplines as human anatomy and physiology to students of different faculties involves taking into account the specific features of training [5,7,8,9].

The psychological integration of the pedagogical component into professional activity and the formation of a new social role for it, requires a psychological and sociological analysis of various problems in the field of teacher training and in the process of obtaining additional professional education "Teacher of Higher School", studying of conditions and factors, affecting the success of this process, providing the teacher with modern innovative social - pedagogical technologies [10,11,12].

Currently, the development of pedagogy opens up great opportunities in the search for new means, forms and methods of training and education. New approaches to the organization of this process are

constantly appearing. Today, every teacher is looking for the most effective ways to improve the learning process, ways to increase student motivation and quality of education. Mastering of modern pedagogical technologies, their application in the teaching process is a mandatory competence of the professional activity of each teacher [2,6]. As shown by the research of A. S. Lysenko [4], a reasonable and methodologically justified combination of traditional and innovative can serve as the basis for the optimal organization of higher education

One of the tasks of our department of "Zoology and Anatomy" in this direction is the identification, generalization and dissemination of effective pedagogical experience of creatively working technology teachers; analysis, approbation of new methodological support of the educational process, the introduction of new forms, technologies and methods of teaching, in particular, in the process of teaching course of "Anatomy and human physiology".

Pedagogical technology - the direction of pedagogy, has a goal of increasing of the effectiveness of the educational process, guaranteeing in the achievement of the planned outcomes of learning.

Pedagogical technology is represented by three aspects:

1. Scientific: pedagogical technologies - a part of pedagogical science, publishing and developing goals, content and teaching methods, designing pedagogical processes.

2. Procedural and descriptive: a description of the process.

3. Procedurally - effective: the implementation of the process.

Any pedagogical technology must satisfy the basic methodological requirements - technological criteria, which are:

- Conceptualism;
- Systematic;
- Manageability;
- Effectiveness.

The technology answers the question - how does achieve to best form for the goals of teaching and the management of this process. The technology is aimed at the consistent implementation in practice of a pre-planned learning process.

A designing of the pedagogical technology involves the selection of the optimal system of pedagogical technologies for specific conditions. It requires the study of individual characteristics of personality and the selection of activities, adequate age stages for the development of students and their level of preparedness.

The listed criteria of manufacturability determine the structure of pedagogical technology, which includes of three parts:

- Conceptual framework;
- Substantial component of training;
- Procedural part - the technological process.

***The conceptual part*** of pedagogical technology is the scientific basis of technology, those psychological and pedagogical ideas that are laid in its foundation.

***The content part*** of the technology consists of goals - general and specific, as well as the content of the educational material.

***The process part*** is represented by a system of the following elements:

- Organization of the educational process;
- Methods and forms of learning activities of students;
- Methods and forms of work of the teacher;
- The activities of the teacher on managing by process of mastering the material; diagnosis of the educational process.

Like any technology, pedagogical technology is a process in which there is a qualitative change on the impact of the student. Pedagogical technology can be represented by the following formula:

Pedagogical technology = goals + objectives + content + methods (techniques, means) + forms of training.

The organization and implementation of this process (pedagogical technology) depends on the requirements of leading didactic principles.

***Didactic principles***, or principles of teaching - these are guidelines, fundamental laws that guide the activities of a teacher and help to determine the content of instruction, methods and forms of teaching. The main didactic principles include of:

- The principle of scientific and accessible training;
- The principle of systematic teaching and the connection of theory with practice;
- The principle of consciousness and activity of students in the process of learning with the leading role of the teacher;
- Principle of visibility;
- The principle of the strength by assimilation the knowledge and relationship of learning with the comprehensive development of the personality of students.

In the course of our research, at the first stage, we prepared and conducted a traditional lecture lesson and a lecture lesson by using innovative methods (Cluster, Saw method, presentation).

Classes were held at the Faculty of Natural Sciences, Department of Biology and methodology of teaching for the 5th semester. In the experimental group (301), a lecture was held by using new pedagogical technologies. In the control group (302) of the Faculty of Natural Sciences, a traditional lecture was held.

After classes, a survey was conducted among students. The questionnaires contained the following questions:

- What role does play to study the topic of "History of the development of teaching methods of biology in Uzbekistan"?
- What news have you learned?
- What parts of the lecture did you like?
- What parts of the lecture didn't you like?

The survey involved of 49 students.

The results of the questionnaire convinced us that it was necessary to improve the process of teaching the subject of "Anatomy and human physiology", to introduce new forms and ways for conducting effective classes with students for activation and cognitive activity.

On the basis of results, obtained during the research, we made the following conclusions:

- To achieve a significant improvement in the quality of student training in the study of the course of "Anatomy and human physiology" is possible if;
- Methodically competently use the new pedagogical technologies;
- Improving the teaching of the course of "Anatomy and human physiology" iscarried out successfully based on modern pedagogical approaches and the use of a variety of innovative methods.

The degree of activity of students depends on the methods and techniques of the teacher. Active teaching methods should be called those that maximize the level of cognitive activity of students, encourage them to study diligently. In teaching anatomy and physiology, it is advisable to use problematic - search options for verbal, visual and practical methods

Thus, through the systematic application of variety innovative pedagogical technologies to the teaching process of the course of "Anatomy and human physiology", it is possible to increase the quality of their education, as well as the students' interest to study this subject.

**References:**


1. Bulanova-Toporkova, M.V., et al. (2006). *educational technologies*. Moscow: "Mart".
2. Dolgova, T.V. (2017). Blended Learning - An Innovation of the 21st Century. *Interactive Education*, No. 5, pp.2 - 9.
3. Kenzhebaeva, R.K. (2013). *Innovative forms of organization of students' independent work*. Actual psychological and pedagogical problems of vocational training: materials of the IX Intern. scientific-practical conf., January 30-31, Sterlitamak, Republic of Bashkortostan / Sterlitamak branch of Bashkir State University, Part 2, pp.174-179.
4. Lysenko, A. S. (2007). *Technique for the integrated application of traditional teaching aids and means of new information technologies in the course of general biology*: Dis. . cand. ped sciences. SPb.: Publishing House of the Russian State Pedagogical University named after A.I. Herzen.
5. (2016). Methodological principles and innovative teaching methods of the discipline of human anatomy / Artyukhina A.I., Ageeva V.A., Gorelik E.V., Bagriy E.G., Chekanin I.M., Fedotova Yu.M., Orekhov S. N., Matveev S.V. Scientific review. *Pedagogical sciences*, №6. Pp. 31-35. URL: (accessed date: 12/20/2019). Retrieved from https://elibrary.ru/download/elibrary28769840988806283.pdf
6. Nikitenko, P.G. (2006). *Noosphere economics and social policy. Strategies of innovative development.* (pp.95-136). Minsk: Belarusian Science.
7. Pogonysheva, I.A., & Pogonyshev, D.A. (2012). *Traditions and innovations in teaching human physiology.* Physiological mechanisms of human adaptation: materials of an international scientific and practical conference. (pp.8-11). Tyumen: Lakonika Publishing House.
8. Reasonable, E. V. (2012). *Use of modern pedagogical technologies in biology classes* / E. V. Reasonable, Text: direct, electronic. Theory and practice of education in the modern world: materials of the I Intern. scientific conf. (St. Petersburg, February 2012), T. 1, (pp.215-217). St. Petersburg: Renome.
9. Rudaskova, E.S., & Zubareva, E.V. (2016). The formation of key competencies among university students in the field of physical education in the process of teaching human anatomy. *Physical education and sports training,* No. 1 (15), pp. 106-111.
10. Sosnovsky, Yu.V., & Sokolova, T.O. (2011). *Technology vikoristannya computer models with the introduction of medical biological physics.* [Electronic resource]. Access mode: (accessed: 10/18/2018). Retrieved from http://www.nbuv.gov.ua/portal/ Soc_Gum / Vchdpu / ped / 2011_89 / sosanov.pdf /

11. Shurupova, R.V. (2009). On the preparation of doctors for pedagogical activity / R.V. Shurupova, Yu.M. Vasiliev. *Higher education in Russia*, № 12, pp. 47-51.
12. Voronin D.M. (2018). Approaches to improving the efficiency of teaching biology at school / D.M. Voronin, O.A. Zavaltseva, O.V. Khotuleva. *Problems of modern pedagogical education* Ser.: Pedagogy and psychology. Sat articles: Yalta: RIO GPU, Issue No. 59-4, pp. 7-10.