

## **CRITERIA AND FACTORS OF TEACHING BIOCHEMISTRY ON THE BASIS OF AN INTEGRATIVE APPROACH IN HIGHER MEDICAL EDUCATION INSTITUTIONS**

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**ABSTRACT:** This article is aimed at summarizing the experience of using an integrative approach in the teaching of biochemistry in medical higher education institutions, including its improvement.

**KEYWORDS:** Medicine, biochemistry pedagogy integrative approach, methodical teaching criteria.

### **INTRODUCTION**

In Uzbekistan, there was a need to take fundamental measures to improve the quality of the population's health, to form new value directions in young people, to improve the high level of citizenship and patriotism, first of all, to improve the health of young people.

Decree of the President of the Republic of Uzbekistan No. PF-4947 of February 7, 2017 "On the Strategy of Actions for Further Development of the Republic of Uzbekistan", No. PF-60 of January 28, 2022 "For 2022-2026 Decree of the President of the Republic of Uzbekistan "On comprehensive measures to fundamentally improve the healthcare system of the Republic of Uzbekistan" No. PF-5590 of December 7, 2018 Decree No. PQ-2909 of April 20, 2017 "On measures to further develop the higher education system".

In the concept of international education until 2030 adopted by UNESCO, "acquiring a solid foundation of knowledge, developing creative and critical thinking, strengthening cooperation skills and interests" is defined as an urgent task. In the implementation of these tasks, bioecological education is of great importance, and its main development trends are its fundamentalization and humanization, strengthening of integration and differentiation in modern conditions. The educational and activity technology integrated into the educational process is widely used in medical higher education organizations. opens up new horizons for implementation at scale.

In recent years in our republic, in the development of the educational system at the medical university, fundamental sciences, including the teaching of the course of biological chemistry, biochemistry as the main subject is of great importance in the professional training of medical university students, in particular, medical workers, because it affects all areas of the student's personality. has great potential for mystery display.

The student has theoretical knowledge of the purpose of biochemistry, its content, purpose, stages, principles, methods and its use in predicting the future, but it is difficult to apply it in practice in professional activities.[2]

Teaching biochemistry requires following a number of principles.

Ergonomic principle. This principle is related to the need to provide a humane attitude towards the student and a favorable environment for education. Educational technologies should be provided in an intuitive way when teaching students biochemistry. In this case, the student will have the opportunity to freely choose the pace of study, a well-thought-out system of suggestions and instructions, which he can use without a teacher. Educational materials were selected based on the ergonomic principle, taking into account the cognitive, psycho-physiological, physical development of students, the energy spent by them while studying. Based on this principle, students' mental stress is prevented.

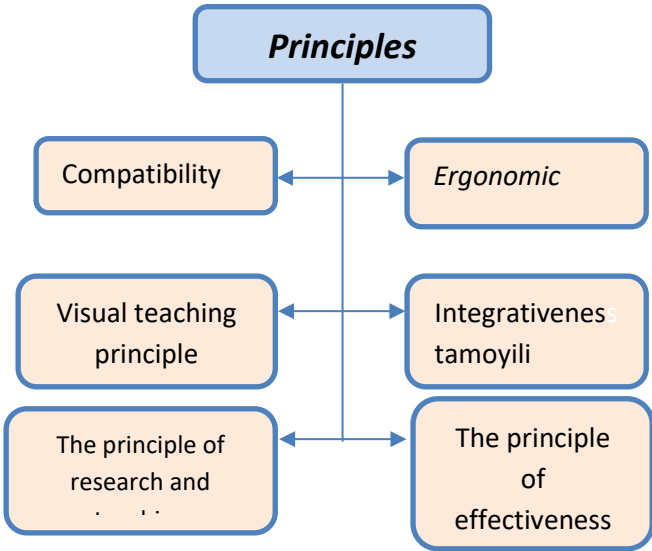


Figure 1. Principles of teaching biochemistry

The principle of compatibility. This principle ensures that the proposed educational technologies related to the problem of teaching biochemistry to students are in accordance with the State educational standards and the requirements of the time.

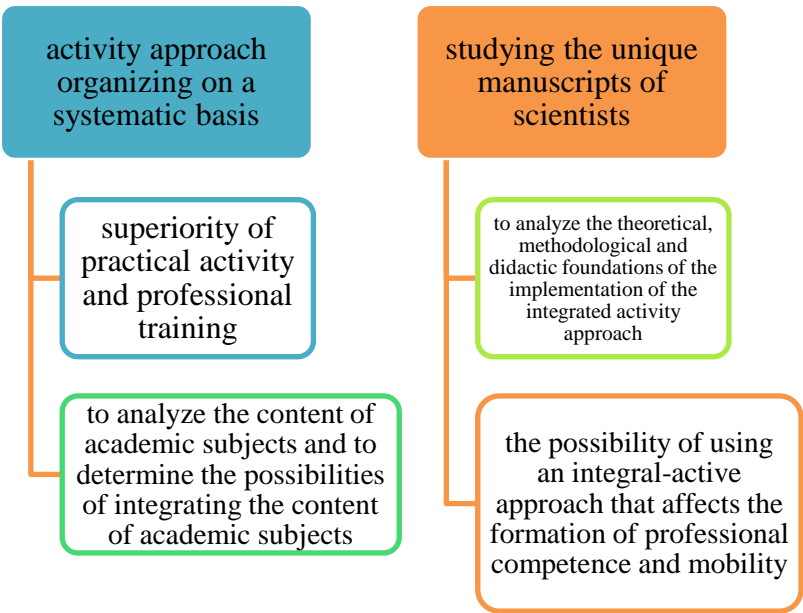
The principle of visual education. One of the main tasks of this principle is the demonstration of educational material. These include 3-D graphic tools (tables, clusters, charts, maps, etc.) and multimedia resources (animation, audio, video). In this regard, according to K. D. Ushinsky, visual education serves as an important tool for increasing students' interest in science and increasing their creative thinking [1].

The principle of integrativeness. Interdisciplinarity in the educational process can be effectively implemented not by itself, but through the professional, scientific-theoretical and scientific-methodical training of the student and on the basis of a deep understanding of its essence. For this, the student should not only know the subject thoroughly, but should be aware of interdisciplinary knowledge related to it.

Lessons organized on the basis of the principle of integrativeness serve to comprehensively develop students' worldview, including interdisciplinarity. This process can be carried out both within the framework of the traditional education system and in the modern educational process. The uniqueness of the process of interaction implies quality changes in each component of the integrative system. So, the lesson based on the principle of integrativeness is different from the usual lessons:

- accuracy, compactness, dense volume of educational material;
  - all-round logical conditioning of educational subjects integrated at each stage of the lesson;
  - It is distinguished by having a wide range of information in the given educational material.
- The criteria for teaching biochemistry based on an integrative approach by a teacher in medical institutions of higher education were considered in the scientific activities of L. A. Sorokina, B. S. Gershunsky, A. K. Markova, N. V. Sidorova.[3].

The criteria for teaching biochemistry based on an integrative approach by the teacher in higher medical educational institutions (S.I. Glukhix) are expressed (picture-2):



Criteria for teaching biochemistry based on an integrative approach in higher medical educational institutions

In medical institutions of higher education, the teacher must comply with the requirements of these criteria when forming the criteria for teaching biochemistry based on an integrative approach, organizing the educational system on the basis of models consisting of the stages of spiritual environment, spiritual activity and spiritual understanding. makes it possible to effectively implement the set goal.[4].

In the course of innovative activities, teaching of biochemistry based on an integrative approach by the teacher in higher medical educational institutions should be done in a comprehensive scientific way, correctly oriented to practical skills, creative work on experiments, projects,

progress It is necessary to plan systematic work by discussing the essence, tasks, advantages, and results of these methods.

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