



MODERN METHODS OF TEACHING MORPHOLOGY AT MEDICAL UNIVERSITIES

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✓ *Resume*

This article deals with the modern methods of teaching morphology at medical Universities and gives several approaches of interactive methods, which can employ these technics not only medical Universities but also diverse directions. In addition, author provides different notions of prominent scientists according teaching and learning morphology in cytology, general histology, general embryology and private histology.

Key words: morphological sciences, interactive method, cytology, general histology, general embryology, private histology.

СОВРЕМЕННЫЕ МЕТОДЫ ПРЕПОДАВАНИЯ МОРФОЛОГИИ В МЕДИЦИНСКИХ ВУЗАХ

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✓ *Резюме*

В этой статье рассматриваются современные методы преподавания морфологии в медицинских университетах и дается несколько подходов интерактивных методов, которые могут использовать эти методы не только в медицинских университетах, но и в различных направлениях. Кроме того, автор приводит различные мнения выдающихся ученых в соответствии с преподаванием и изучением морфологии в цитологии, общей гистологии, общей эмбриологии и частной гистологии.

Ключевые слова: морфологические науки, интерактивный метод, цитология, общая гистология, общая эмбриология, частная гистология.

ТИББИЁТ ОЛИЙГОҲЛАРИДА МОРФОЛОГИЯНИ ЎҚИТИШНИНГ ЗАМОНАВИЙ УСУЛЛАРИ

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✓ *Резюме*

Ушбу мақолада тиббиёт университетларида морфология фанларини ўқитишнинг замонавий усуллари ва нафақат тиббиёт олийгоҳлари, ваҳоланки бошқа йўналишларда ҳам фойдаланиш мумкин бўлган бир неча интерактив усуллар билан ёндашувлар келтирилган. Бундан ташқари муаллиф томонидан етакчи олимларнинг морфологияни ўрганиш учун цитология, умумий гистология, умумий эмбриология ва хусусий гистологияни ўқитишнинг аҳамияти бўйича фикрлари келтирилган.

Калит сўзлар: морфология илмлари, интерактив усул, цитология, умумий гистология, умумий эмбриология, хусусий гистология.

Relevance

Medical education is going through a period of reforms, not all of which, unfortunately, can be regarded as progressive, contributing to improving the quality of student training. However, one thing is indisputable – it is impossible to maintain a stable conservative belief that any deviations from the classical version are undesirable. A lot has changed: the information capabilities of students have increased dramatically, they have become more independent, able, via the Internet, to use the widest range of specialized literature on morphology, including methodological. New information

opportunities are perhaps the most important motivating impulse for the search for modern optimal options for teaching medical disciplines in general and anatomy in particular [1, 2, 3]. The rejection of traditional teaching on anatomical preparations has recently been motivated by the difficulties of their manufacture, storage, cultural, religious and legal obstacles (supervisory authorities began to require a license for the right to use biological materials). It should be recalled, for the sake of historical justice, that the call to abandon natural anatomical preparations is not the first time. More than 80 years ago, the famous French surgeon Rene Lericq (member of 30 academies, author of more than 700 works) wrote that he “would gladly reduce the number of classes in the dissecting room and replace them with the study of dry preparations or their stereoscopic projections”. Reputable morphologists of the world have not supported this statement for many years. More N.I. Pirogov wrote: “Stupidity should not be rushed”. It would be stupid to abandon the museum’s rich arsenal of anatomical preparations, where original, high-quality preparations for all organs and systems of the human body have been painstakingly collected for many years. It is worth recalling the inscriptions in many fundamental museums – “here the dead teach the living”.

Morphological sciences are the main fundamental disciplines that are based on the training of medical students. Unlike Russia, in Uzbekistan, all subjects of the morphological cycle (anatomy, histology, and embryology) are traditionally studied at the same department. Classical methods that are used in most medical universities in the whole world include theoretical lectures, practical classes and home self-training. During practical classes, students examine micro-preparations on a conventional light microscope and find their specific features. At the same time, they rely on their knowledge, which they previously acquired at home in preparation for the lesson.

The use of interactive teaching methods makes learning easier because the student can always refer to extensive information to describe histological preparations. The teacher allows the student to access the Internet and can always control online both access to information in the database or on the Internet, and the student's independent actions on his microscope.

One of the main trends in modern teaching methods is the maximum simplification of information, the ability to convey it to students at an extremely accessible level. An important aspect in this regard is an individual approach to students, the ability to take into account the inclinations and abilities, as well as the level of training and motivation to study of each of them.

The purpose of this work was to describe our experience in using interactive teaching methods in the field of medical science and, in particular, in the study of anatomy.

Materials and methods

In the course of training, we use classical cyto- and histological preparations made in the laboratory of the department. They correspond to the training programs at the Faculty of Medicine and include the following topics:

1. Cytology (cell, organelles and tissues);
2. General histology (structure of tissues and their features);
3. General embryology (embryo development from the moment of conception to the beginning of the formation of organ systems);
4. Frequent histology or microscopic anatomy (histological structure of organs).

For all drugs, we have a similar description in the manuals and in the database, which is stored at the department.

In the classrooms, we use Olympus microscopes, which are connected in a single system with the teacher's microscope. Through a computer, images of the drug are projected onto a large screen on the wall. The teacher can display an image from his own microscope and from the microscope of any of the students.

If necessary, he additionally demonstrates all the drugs that are stored in an electronic database. In this case, students can make a comparison between their drugs and standard samples in the database of the department. If necessary, the head can log on to the Internet and find interesting drugs in the databases of many world universities.

Results and discussion

In the course of training, our students have the opportunity to use the best preparations of the Department of Histology, Cytology and Embryology in Samarkand Medical Institute and get an explanation of all the details of the microscopic image on the big screen. The system allows students to exchange data, get an explanation of all unclear points from the teacher, form a visual

representation of the most important histological objects that can be seen on the drug, differentiate the important from the unimportant.

As a result of the widespread use of interactive teaching methods, the study of morphological disciplines has become easier for both teachers and students, and the results of the educational process have improved significantly. Interactive learning is a modern method for teaching students of different specialties. It allows you to use an electronic database that is stored at the department and is available to students. This method is used in many countries around the world. All teachers talk about good results due to the transition to interactive learning.

This approach is an innovative method with an important practical application in the study of morphological disciplines. At the same time, students acquire modern and systematic knowledge, a visual representation of the histological structure of cells, tissues and organs. At the same time, they gain practical skills in the use of the studied material.

Conclusions

1. Interactive learning is a modern method for mastering theoretical and practical knowledge.
2. This method is applicable in the field of medicine, it can be effectively used in the study of morphological disciplines such as cytology, general histology, general embryology and private histology.
3. As a result of training, students receive good theoretical and practical knowledge in the studied disciplines, which is reflected in the results of semester exams.

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