



**Voronezh N.N. Burdenko State Medical University**

**Organizational and methodological aspects and  
problematics of teaching various disciplines at the  
Department of Normal Physiology to foreign students of  
the Medical University**



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**Voronezh, April, 2020**



## Preview

We present the teaching experience of the disciplines "Normal physiology", "Physiological basis of acute medical problems" and "Physics. Mathematics" of the Pediatric faculty of VSMU named after N. N. Burdenko to foreign students. Organizational and methodological aspects and problems of the taught disciplines will be considered, as well as the tasks that the teacher faces when organizing the educational process.

The educational and methodological complex developed at the Department of normal physiology, is aimed at intensifying students' learning. The possibilities of using informative and communicative technologies in teaching foreign students in an intermediary language will be discussed using the example of the distant learning system (Moodle). We underline the importance of overcoming communicative and socio-cultural barriers in classroom learning, taking into account the moral characteristics of students in the formation of students' groups and the creation of a favorable psychological climate in them.

**Medical education** in Russia has a long history and traditions. More than 70 universities in the country train specialists of the highest medical profile, graduates of Russian universities are in demand all over the world. Foreign citizens who study in both Russian and intermediary languages are also trained at the medical universities. Long-term research on the methodology of teaching foreign students various medical disciplines shows that the educational process is often accompanied by a number of difficulties, primarily due to existing communicative and socio-cultural barriers. These obstacles are based on differences in mentalities and established stereotypes of perception and behavior of other nationalities.



Due to the fact that people can get a higher medical education only by a full-time studying, the educational process must also take into account the specifics of the classroom work of foreign students, especially in the student-teacher dialogue. To achieve this goal, each specific group of students must individually approach the development of practical classes, based on the idea of the psychological climate of this group of students. It consists not only of taking into account the personal qualities, academic performance and professional orientation of individuals, but also of the difficulties that accompany students from mixed ethnic groups. The current microclimate of the group affects the success of their joint activities, satisfaction with the learning process and its effectiveness. In such an environment, some students find it difficult to realize their potential, although professional growth and self – realization are the needs of any **modern person**.

**The teacher faces a difficult task** – to organize the educational process by taking into account the peculiarities of the mental and cultural aspects of the students' personality, to structure classes according to the existing Federal state educational standard (FSSES), and to use a creative approach in the implementation of this goal. For foreign students, the teacher's communication skills (grammatical correctness, speech culture) are the defining criteria for both professional and personal qualities.



## 10 Skills for Modern Teachers



It should also be noted that differences in moral values create additional difficulties in teaching foreign students, despite the fact that some scientists claim that social and moral thinking in people is automatic. Research in the field of neurophysiology has allowed us to identify specific areas of the brain involved in the social thinking, and other areas – in moral thinking, which indirectly indicate the existence of objective **universal moral values**.

## *Suggestions*

For example, it was shown during the research course of VSMU foreign students, that the moral consciousness of groups of participants from India (Hindus) and Russia (Orthodox Christians) is based on the principle of "Justice", according to Kolberg; from Turkmenistan (Muslims) – on the principle of "Care"; Nigeria (Catholic Christians) – both principles play a key role. The maximal degree of consent of Indian group students is expressed for the stages of moral development, which imply an orientation towards compliance with moral rules and norms and their universality for the whole society, as well as a tendency to reflection in the decision-making process in the problems of moral behavior.

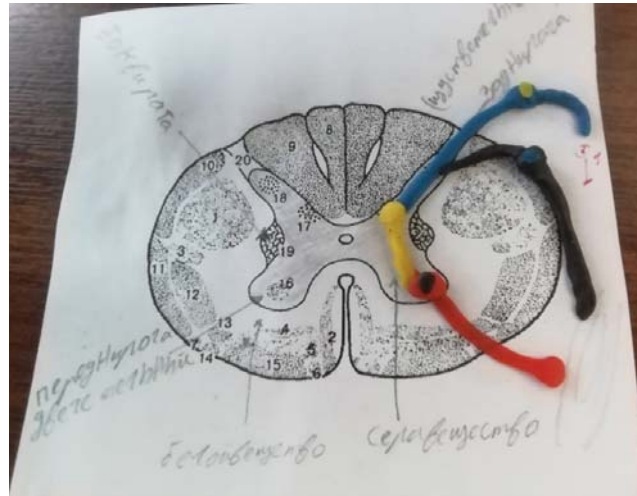


Moreover, there are internal moral values of foreign students and external ones – formed by the social environment and, in the most cases, more pronounced. These observations and remarks should be especially taken into account when forming "mixed" groups of students, since there are the moral attitudes which in general form the **personality of the doctor**.

**Quite often** groups from Russian Universities formed of foreign students include individuals belonging to different language groups and use Arabic, Kurdish, French, Turkic and Indo-European languages for communication. Using an intermediary language (English) does not always solve the all pedagogical problems. It should be noted that the initial belonging to the "native" language group has an impact on the continuing formation of the student's thinking in the conditions of adaptation to the Russian University. The use of an intermediary language of a "non-native" language group can inevitably lead to complications in the formation of thinking among foreign students.



**Visually-effective, visually-imaginative** and **verbally-logical thinking** represent the main forms of thinking used by a person for cognition of the surrounding world. In the absence of a "language barrier", thinking goes through the process of formation and development from purposeful objective actions to verbal and logical forms. On the contrary, if there is a barrier, it is more effective for foreign students to form a relationship between the main components of cognition: **action, word, and image.**



Ответ: См. учебник, изд. 2011 г.  
Электронный ресурс системы Moodle  
<http://moodle.vsmaburdenko.ru/course/index.php?categoryid=199>  
**4. ВЫПОЛНИТЬ ЗАДАНИЯ.**

1. На рис. 1 подпишите основные 6 звеньев рефлекторного пути соматического рефлекса человека; на рис. 2 создайте свою схему рефлекса, используя рисунок 1.




Рис. 1

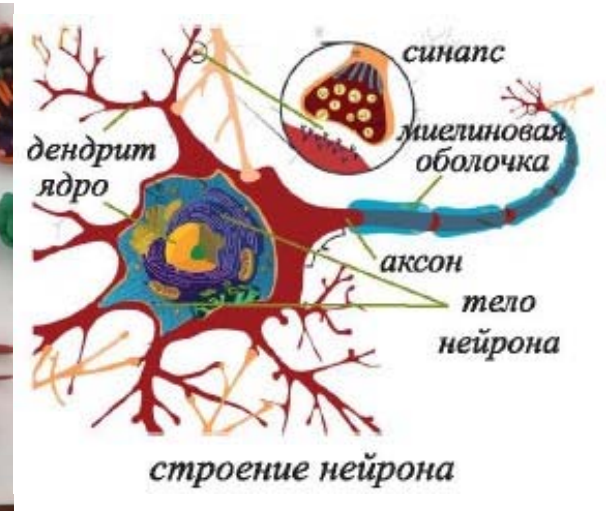
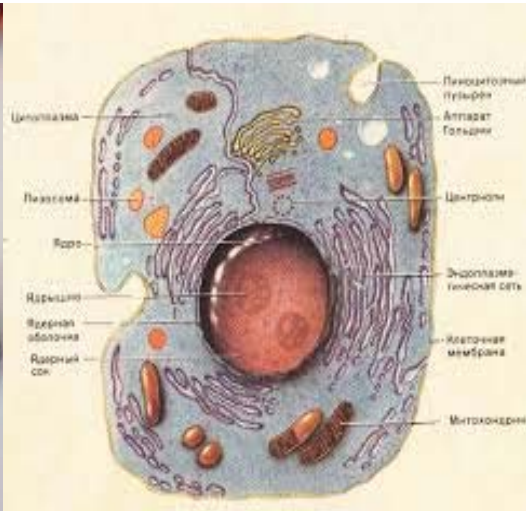
Рис. 2

2. Обозначьте кто, из перечисленных исследователей, являлся автором рефлекторных теорий, представленных ниже (П.К. Анохин, Р. Декарт, И.М. Сеченов, И.П. Павлов)? Обозначьте основные компоненты схем и подпишите имена авторов.

1. Рефлекс - это ответная реакция организма на действие какого-либо раздражителя, которая осуществляется с обязательным участием ЦНС. "Если отключить все рецепторы, то человек должен заснуть мертвым сном и никогда не проснуться".

*The example of students' work.*

**Visually-effective thinking** occurs when a person meets new conditions and a new way to solve a problem in practice. On this basis the visualizations are formed, which become more flexible and dynamic, and there is an improvement of full-fledged images and their operation in the mental plan. Many outstanding teachers at the beginning of the 20th century paid a special attention to the role of a **sensory influence** in the **learning process**.



*The examples of students' works.*



**Sensory exercises** awaken activity, enhance it. Having isolated a separate sensation and a separate stimulus, the student receives a clear, conscious impression. The passive mind receives only images limited to randomly collected objects, although each thing and phenomenon has an infinite set of properties, and, as often happens in a visual lesson, they are confused with the origin and purpose of the object itself, which tires and clouds the consciousness, which cannot be turned into a dynamic awakening of similar associations.

### Experiment 1. Tuning fork tests. Rinne test.



*tuning forks*



*bone conduction time (15 seconds)*



*air-conduction time (28 seconds)*

*Conclusion.* Try to estimate your results. Is Rinne test **positive or negative?** **R+ or R-?**

*Discussion.* Describe the physiological mechanisms the sound conduction in external and middle ear.

*The examples for the students' distant learning.*

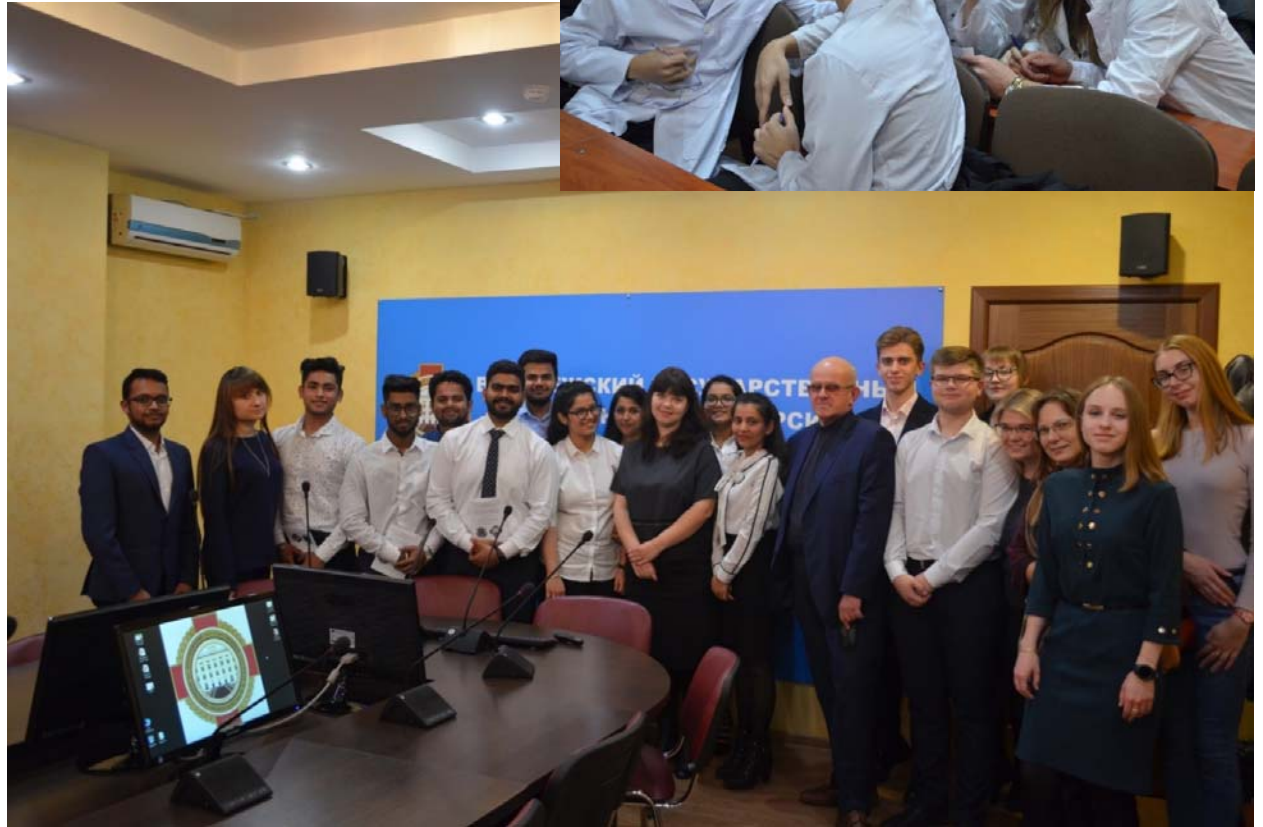


**The educational and methodological complex** for teaching foreign students developed in accordance with the requirements of the Federal state educational standard-3, is used at the Department of Normal physiology of VSMU named after N. N. Burdenko. This complex was created for the formation of professional and cultural competencies of students of the "general medicine" specialty. The textbook and notebooks for independent students' work are focused on the implementation of modern pedagogical methods; they allow monitoring the current progress of students and generally structure classes.



Solving the sophisticated problems of learning the Department's disciplines through the prism of socio-cultural barriers is aimed at using specialized video materials, posters, presentations in the classroom, contributing to the better assimilation of the material and its memorization. Oral discussion of theoretical material is accompanied by duplication of thesis statements, which are emphasized through the use of presentations and drawing up diagrams. The usage of various forms of organization of the educational process, including gaming, has a positive effect on the effective assimilation of **educational material**.

**Participation** in scientific circles and University Olympiads, speaking at conferences and seminars on topical issues of medicine leads to increased motivation of students to further study of medical disciplines.



The rapid development of **information technology** has long been a part of modernity. Young people's access to the Internet is an integral part of their lives. Getting information through various educational sites saves time, and their visibility often simplifies the assimilation of materials by students.

**At the Department of Normal physiology of VSMU**, the EMC developed in English for taught to foreign students' disciplines, works on the basis of the Moodle platform (Modular Object-Oriented Dynamic Learning Environment).



**The electronic educational complex** contains theoretical material – presentations, lectures, books, as well as knowledge control tests. The remote unit allows students to individually master the educational material, planning time, and enable teachers to evaluate the students' knowledge based on the results of solving their relevant tasks. A comprehensive approach to learning-theory, practice, and control (Moodle) – takes into account the complexity of the taught discipline and allows ones to partially level them.

Thus, the **development of medical science** by foreign students is accompanied by a number of difficulties caused not only by the language barrier, but also by the national mentality. In this regard, it is necessary to timely identify and take into account potential differences that arise between students in the "mixed" groups. The use of various forms of organization of the educational process opens up the possibility of overcoming the problems that arise for foreign students on the way toward obtaining a **high medical education**.



Thanks for attention!

