The Role of Models in the Process of Professional Training of Medical Students

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Optimization of teaching in higher education provides continuous introduction of new, innovative forms and techniques into the learning process. The distinguishing feature of modern educational technologies is changing of the nature of interaction between the subjects of educational process. The priorities are changing. We can observe the displacement from the transition of knowledge to the creation of conditions for a fuller realization of personal potential and manifestation of a student's properties in learning activities. The usage of technical aids in the educational process is defined as the technological revolution by many researches. Computer programmes and other equipment specifically designed for educational purposes are used in teaching. They are electronic classrooms, teaching machines, simulators, models.

At the Department of Dermatology and Venereology, students study Dermatology and Venereology. Dermatology is a discipline that studies the healthy

skin and skin diseases. In the course of Venereology, students study sexually transmitted infections. The most widespread of these infections is syphilis. Despite the fact that syphilis is studied in the course of Venereology, its major symptoms are lesions of the skin and mucous membranes. Most dermatoses and manifestations of syphilis are well defined visually, but each of the clinical entities has its own morphological features. Hence, visibility becomes of great importance in dermatology as in science and in its teaching. According to the convention modern teaching of dermatology eliminates, or at least, limits the clinical examination of patients by students. Instead, patients' photographs, slides, models, tables are used. For instance, teaching of dermatology in France, where the members of the department of Dermatology and Venereology of our University attended the practical classes at the Department of Dermatology in the city of Lyon, eliminated examination of patients.

Our Department of Dermatology and Venereology has a big collection of colour illustrations of all nosological forms. However, all colour illustrations in atlases, both domestic and foreign, do not give students the opportunity to determine the volume element and other characteristics of any disease

manifestations. In this cases wax dummies help a lot. Wax dummy is a modal that is an exact copy of the affected area of the skin.

Crappy art has been known for a long time. The first people to reproduce the pathology of the skin were the Fiveiskys. Moulages made by Fiveiskys are still kept at the State Research Center of Dermatology and Venereology in Moscow and in the I.M. Sechenov Moscow Medical Academy.

At present, teaching materials produced by Denover Geppert Science Company are used in educational process at the Department of Dermatology and Venereology of Irkutsk Medical University. For example, in the series "skin" volume model of the plastic skin with cut portions of nail plate and hair follicles is shown. The model consists of three separate parts which presents human skin cut in 80 times magnification. Microscopic structures found in the skin, such as sensory closure, glands and blood vessels are presented on the cut and help to understand the spatial relationships at the micro level. Each of three patterns can be separated from the other ones, put on a common base and connected to each other by means of magnets. The model illustrates corresponding microscopic structure differences of the skin depending on the localization on the human body. For example, the model of a papillary layer, which is located on the palm, presents its

typical characteristics. They are a relatively thick layer of the epidermis and a clear boundary between the epidermis and dermis. On the model of mesh layer, disposed (is seen that) on the rear of the hand, it is seen that this layer is spread in small areas, passing through the skin striae. The hair shaft projecting above the epidermis and the hair epithelial root sheath are clearly shown in perspective on the longitudinal cut of human scalp. On this model anatomical structure peculiarities of the skin, such as nerves, blood vessels, sensory ends can be identified.

Teaching Venereology limits the ability of mastering the skills of students because not every patient will agree to give answers to intimate questions of the students, and to conduct manual procedures, to conduct the study. Special simulator helps to study prostate cancer. Through a hole in the simulator a student can conduct manual procedure on the prostate. This simulator is a square box with a hole and installation of four modes: normal, benign enlargement, prostate adenoma, malignant tumor.

Thus, such visual aids can be used for practical training of Dermatology and Venereology, and at the interim and final exams. The advantage of these aids is the ability to use them for the development of practical skills of students.