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The Application of Intelligent Simulated Human Teaching Equipment in Clinical Practice

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Abstract. The application of modern science and technology to the basic experimental teaching of medical students is an important trend in the reform of experimental teaching in medical colleges and universities. The international advanced intelligent simulated human ECS teaching equipment and integrated functional experimental teaching are organically combined to operate and apply in the virtual clinical cases, and the theoretical knowledge and clinical skills are tested. This has achieved remarkable results in the cultivation of modern medical education talents, and has achieved the goal of cultivating students' clinical thinking and analytical ability, and improving the comprehensive quality of medical students, thus providing new ideas for the reform of modern functional experiment teaching.

1. Introduction
With development of medical education, a lot of medical colleges and universities are equipped with various intelligent simulators[1]. Therefore, it is necessary to strengthen teacher training to make full use of their advantages in medical education. Teachers who implement simulated human teaching should not only have professional knowledge, but also be familiar with various performance of simulated teaching system. They should have certain basic knowledge of computer, master the programming of specific cases of simulated human, and be able to constantly adjust the program content according to teaching needs[2].

2. Importance of the Application of ECS in Clinical Medicine and Basic Medical Education
Comprehensive ability is an important objective basis for evaluating the quality of medical students. In recent years, the first aid teaching based on the clinical skill center has achieved good teaching effect, and is deeply loved by teachers and students[3]. In addition, our school to functional development of the intelligent simulation people, intelligence simulation was applied to basic pharmacology, physiology, pathophysiology of anesthesia teaching of basic medical course, the effect of these simulation is applied to the teaching of preclinical medicine have shown can improve the students' learning interest and enthusiasm, to strengthen students' team cooperation and communication and collaboration capabilities, have qualitative increase compared with the traditional experimental teaching, and promote students to basic medical knowledge and clinical, can be a problem[4].

3. Potential Necessity of Applying ECS to Medical Education
In view of the importance of intelligent simulators for basic medical education, in terms of the course arrangement of functional experimental science, more than ten experimental contents similar to clinical medicine courses are set up in the later stage of the course of functional experimental science,
that is, to design some typical cases combining clinical manifestations and basic knowledge for practice and research[5]. The simulation applied in function experiment teaching, establish this new experiment course system, in order to achieve the teaching goal in the paper are as follows[6].

3.1. Understanding the Relevant Clinical Manifestations,
It stimulates students’ interest in learning and improves their initiative, enthusiasm and creativity in learning. It makes the students discussed course phase in addition to the normal physiological and pharmacological actions of observing animals and pathophysiological change process, but also on the simulated observation simulating human physiological and pathological changes, compare the differences and similarities between the two, learn to use the basic knowledge to explain by physiological, pharmacological and clinical pathological physiological characteristics, consolidate and deepen the theoretical knowledge[7].

3.2. Updating Knowledge
It helps students update their ideas and change the idea that there is no direct connection between the physiological and pathological changes of animals and the pathological and physiological changes of human body in the past animal experiments, and improve their ability of comprehensive analysis[8].

3.3. Comprehensive Nursing Skills Training
Compared with the previous single operation training, ECS simulation applied to the new nurses in pre-service training, can make the new nurses and verisimilitude, as it were, the role of the experience they value, more intuitive, more real practical skills, shorten clinical adaptation and contribute to the formation of students' concept of holistic nursing, promote the mutual infiltration of basic medical education and clinical practice education, pre-job training to lay a good foundation for the old[9].

4. Application of Intelligent Simulated Teaching System in Clinical Internal Medicine
In internal medicine, students are often taught in the form of classroom explanation and case discussion, which often results in students' inability to form perceptual knowledge, and it is difficult to apply what they have learned in practical situations[10]. In addition, there are few opportunities for clinical practice in the current situation where clinical teaching resources are relatively scarce.

4.1. Advantages
Studies have shown that simulated human teaching can design multiple different cases, and it is a highly practical subject to adapt to internal medicine. Therefore, experimental teaching has become an important part of higher medical education[11]. At present, due to the shortage of medical resources and the waste of experimental animals, many medical colleges and universities begin to try to apply many high-end simulation technologies to the teaching process of functional experiment for undergraduates[12].

Functional experiment course is the integration of the experimental teaching of physiology, pharmacology and pathophysiology. It is an applied subject with strong practicality and aims to cultivate students' comprehensive application ability of knowledge and skills on the basis of basic subjects[13].

4.2. Experimental Teaching
At present, the experimental teaching of functional science is more about allowing students to observe and record experimental phenomena, analyze experimental results, write experimental reports and other basic methods in class through animals (such as rabbits and rats) to discuss the rules of functional activities of animals, and observe the changes of animals under man-made disease or drug intervention[14]. The system has high security, high simulation, highly controllable, without any risk, record, playback, etc., can according to different levels of teaching should be on the ECS design all kinds of difficulty and different stages of experiment, and can according to the needs of teaching, to adjust the difficulty of the treatment, has the very high practical operation. Students can repeat the process infinitely, truly allowing students to make mistakes and learn from them.
4.3. Functional Science

How to make students better combine basic medical knowledge and clinical phenomena through experiments, effectively cultivate students’ clinical thinking and analytical ability, and improve the comprehensive quality of medical students is the key point of modern medical experiment reform [15]. Therefore, the function of the university experiment center on the basis of medical students medical learning phase, try to use intelligent simulation function of ECS system comprehensive experimental teaching, animal experiment and simulation organic fusion, for medical students contact clinical situation as soon as possible, in order to improve medical students' practical ability, knowledge, comprehensive ability and innovation ability to build a good experiment platform [16].

5. Conclusion

In the pre-practice practice of nursing and medical students, the comprehensive ability training of nursing students by using the comprehensive simulator also achieved good results. Simulated human teaching has a significant effect on improving clinical thinking ability of nursing students. Nursing students can timely and accurately observe subtle changes of patients' conditions and describe and record them in appropriate medical language. When facing patients, I can be relatively confident and calm, and I can flexibly apply what I have learned to the nursing process of patients according to their specific conditions.

6. References

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