

Practice of research-based Teaching in physiology Undergraduate teaching

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Physiology is one of the key courses in medical curriculum system and plays a fundamentally important role in medical education system. For the rapid development of science and technology, the teaching-learning of physiology during the medical students training currently faces great challenges. Research-based teaching can be useful tools to stimulate interest and encourage the search for knowledge and be good for the training of medical students. We carried on research-based teaching in physiology curriculum and performed the reform to determine the mode which is more suitable for medical undergraduate students. Teaching content selection of research-based teaching: Compared with professional scientific research topics, we choose undergraduate teaching content that is easier to understand and is close to the knowledge of undergraduates as the research topics. Curriculum implementation of research-based teaching: firstly, teaching objectives were defined; then, the teaching process included the basic steps of scientific research: forming scientific hypothesis, setting research objectives, determining research methods, obtaining experimental results, discussing experimental results, and forming conclusions. Experience of research-based teaching include: 1. Students' critical thinking skills has been stimulated; 2. the knowledge integration and the clinical thinking skills have been established; 3. Students' scientific literacy has been improved; 4. Students' cooperation and communication skills have been improved. 5. More students are benefited. To sum up, research-based teaching helps to improve physiology teaching effect, it is good for the cultivation for medical students. Research-based teaching can help students to master the basic knowledge, also help them to develop the problem solving ability, logic reasoning ability, creatively working ability, communicational and cooperative ability, writing skills, and so on.

Keywords: research-based Teaching; physiology; Undergraduate teaching