

Combining the first class with second class to improve the professional skills of medical students^{*}

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Medical science is a highly practical subject, which is closely related to human life. Medical institutions take a heavy social responsibility, in addition to the sacred mission of teaching and educating. The professional skills of medical students are one important assessment indicators to become a qualified doctor. Therefore, how to improve the professional skills of medical students in their training process becomes crucial. In recent years, our school has done a lot of work about the first and the second class, and so far has achieved good effects. First and second class together constitute the college personnel training system. They are closely related and complementary to each other. On one hand, the first class focuses on basic knowledge transfer and common education, which is a major goal of higher education; On the other hand, the second class is to enrich and expand their professional knowledge, which plays a very important role in improving the professional quality, the scientific spirit and sense of innovation. A combination of them can effectively improve their proficiency of professional knowledge and expertise. Combining the first and second class, the author explores how to improve the professional skills of medical students.

1 Deepening teaching reform of the first classroom

In the context of medical popularization of higher education, the competition among colleges and universities becomes increasingly fierce. The decline of the quality of education and teaching is becoming more and more prominent. As a result, medical education reforms are imperative, including building organ-system centered curriculum system, optimizing experimental teaching mode, reforming and innovating teaching methods and means and improving teachers' knowledge reserves and teaching ability.

1.1 building organ-system centered curriculum system Integrate the teaching contents of basic medical courses into Medical General and nine course modules. Medical General includes the basis contents of anatomy, histology and embryology, physiology, pathophysiology, pathology, pharmacology and so on, which can be offered before the system module course and can lay certain medical basis for students. System module course in-

cludes nine modules, the circulatory system, digestive system, urinary system, sensory system, nervous system, respiratory system, blood, endocrine system, reproductive system with sex, human development system and so on. Each module has its teaching team, breaking the traditional disciplinary boundaries. Each module is responsible for writing the outline of the syllabus, selecting the teaching content, carrying out a collective lesson planning and checking examination and assessment content. This curriculum system may avoid the drawbacks of traditional medical education system and promote further integration for the preclinical and clinical medicine, which is helpful for cultivating students' comprehensive ability^[1]. At the same time, College Education Steering Committee and Teaching Steering Group have been established to ensure the quality of education and teaching.

1.2 optimizing experimental teaching mode We break the traditional teaching mode of the experimental teaching assisting the theory teaching, and reasonably optimize and integrate the teaching laboratories of various disciplines, including human anatomy, morphology, kinesiology, pathogen biology, biochemistry and molecular biology. Institutes rely on the laboratories above to set up the basic experiment, comprehensive design experiment and the study of innovative experimental teaching mode. Multi-track methods are adopted to enhance students' comprehensive ability. For example, the experimental contents of anatomy, histology and embryology, and pathology are integrated into the experimental teaching platforms of human anatomy and morphology. In the process, students gradually master the body changes from normal to abnormal, and the basic experimental operation skills. The experimental contents of pathogen biology, immunology and molecular biology are integrated into the experimental teaching platforms of biochemistry, molecular biology and pathogen biology to enable students to master the response and mechanism of the body against pathogens and cultivate students' research and thinking ability. The experimental contents of physiology, pathophysiology and pharmacology are integrated into the experimental teaching platform of kinesiology to focus on training students' operation

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ability in clinical trials.

1.3 The heuristic method of teaching is adopted to pay full attention to taking the students as a main body. The perfusion teaching is changed into heuristic teaching. At the same time, the one-sided indoctrination knowledge is changed into the cultivation of students' ability, which not only ensures the teaching focus but also develops students' thinking ability and the learning enthusiasm.

1.3.1 Case-based teaching Case-based teaching is a teaching method, in which the students are taken into the specific live events, depth role and reproduction case scenario under the guidance of the teacher, in order to improve the students' actual operational capacity^[2]. The typical clinical cases are taken mainly to combine with the basic theory organically in medical teaching to form a complete set of curriculum system. Combining the boring theory study with the clinical cases' discussion may enlighten students to think independently and arouse the students' enthusiasm.

1.3.2 Problem based learning(PBL) Under the guidance of teachers, problem-based learning is guided by the problems, in this process, students' self-study discussion plays an important role in grasping the learning method and the students are inspired by logical reasoning ability and self-learning ability. As a result, students can understand the knowledge in depth^[3]. The work including students sending into groups, setting hours, selecting cases, raising questions will be prepared before the class. The teacher shows a brief clinical case and stresses the issues raised before class, so that the represents in each group can analyze the case in the first round. The teacher asks a new question and points out students' errors and doubts based on students' speech. Next, students conduct a second round of analysis to discuss or debate the different views. After the class, students must not only record their own as well as the group problems and errors, but record the settlement process to the problems in detail, besides answering the main problems of the cases. Teachers could hold some seminars to discuss how to plan the curriculum and make some effective adjustments, and finally improve the teaching and studying.

1.3.3 Network teaching method with computer multimedia People are easier to see more than listening in their memory. Relative to the writing on the blackboard, many images and real cases are represented by the network applications of the multimedia. The teachers teach seriously in class and students view learning resources by logging on to the network curriculum or teaching blog after class. All the above can well stimulate the students' interest in learning and knowledge memory. With the help of the computer and the Internet, computer assisted teaching(CAI) has become an important part of the modern education science and teaching means^[4].

1.4 Improving teachers' knowledge and ability of teaching Knowledge and teaching ability is an important premise for a good teacher. Only with a large knowledge, can teachers be flexible in class. That's why many famous educators in class can lecture vividly and have one's words at hand. The teaching ability and knowledge reserve of teachers', (especially the young teachers') should be perfected and improved through a series of ways.

1.4.1 Strengthening teachers' moral construction Teacher morality is teacher's occupation moral cultivation and the ideology and the work style it displays. Regular teacher occupation ethics training, the teachers' morality report, the discussion between the young and the old teachers, the training about theory of modern education and the relevant lectures and forums and other works have been vigorously carried out to promote the construction of teachers' moral advanced typical case and to build a teacher's team with high qualities.

1.4.2 Promoting teachers' professional level and working ability Teachers are encouraged to study in-service for degrees and go out to study, train and participated in all kinds of academic conferences. Young teachers are arranged work in the experimental technology post to improve the level of business.

1.4.3 Holding a series of research activities Holding teaching activities is an effective carrier to strengthen teachers' building. Many activities are held to build a good platform for teachers to learn and exchange their ideas. The activities include teaching observation, group lesson preparation which is open to be observed, teaching skills competition, young teachers' game lessons, teaching evaluation, multimedia courseware game competitions, young teachers' teaching experiment skill competitions, teaching achievement meeting and so on.

2 Playing educational function of the second class

The second class, namely outside class activities, is referred to all extracurricular activities that the students attended outside the teaching plan with professional knowledge. In a narrow sense, comparing with the first class, it has study and practice activities with the educational connotation. That is to say, the students take part in organized activities outside the teaching program in plan^[5]. Medical students' professional skills are improved by the second class activities our university.

2.1 Series of skill competitions Series of skill competitions are held, mainly focusing on cultivating medical students' observation, thinking and the ability to operate independently in order to stimulate students' interest in learning and to improve medical students' professional skills.

2.1.1 The clinical application Anatomy Skills Competition The contest is divided into two parts, written exam and experimental skills exam. The written exam mainly focuses on students' mastery of anatomical knowledge. The experimental skills exam is to allow students to observe the bones, cadavers and plasticized specimens and to write the names of the signed structures and answer the related clinical questions. The competition is aimed to enable students to understand and master the learned anatomical knowledge, which can lay a solid foundation for the clinical subjects. In a word, the clinical application Anatomy Skills Competition has a clear theme and clear thinking, and it can improve student's learning methods.

2.1.2 Students' learning skill expanding contests The competition is divided into several parts, including students' self-organizing team, common literature, multimedia courseware, Pre-lecture, instructor counseling review, electing their representatives to teach on stage and so on. This contest can expand students' learning skills and develop the students' innovative ability and the spirit of unity and cooperation.

2.1.3 Medical knowledge Grand Prix Grand Prix has the

following types, such as true or false, single choice, multiple choices, grab answer, comprehensive questions, risk problems, and the experimental skills operation. Grand Prix shows consolidation of medical knowledge and stimulates students' interest and hobbies, which can also improve the basic skills of medicinal science.

2.2 College Students' science and technology innovation program College Students' science and technology innovation contains the following aspects, organizing a team by students, selecting independent subjects, writing proposals, contacting the tutors, operating experiment and making a summary of experiment, etc. It can train students' scientific thinking to discover questions, describe problems, find methods and solve the problems, which can improve students' comprehensive design ability, operation ability and capacities of summary.

2.3 Establishment of students' Forum The establishment of students' forum can provide the platform for students to show themselves. The briefing book report, research, academic forums, exchange of experiences of preparing for the entrance exams for postgraduate schools or social life can constitute various students' forms, which is helpful to cultivate students' interest and study spirit and promote students' abilities of collecting and selecting data, analyzing and solving problems.

The first class is the main body for educational system of colleges and universities and has more emphasis on medical students' mastery of the basic knowledge. The structure of medical education is changed by building the curriculum system centered on organ, system, optimizing the experimental teaching mode, and perfecting the medical education, which is helpful to cultivate medical students' comprehensive abilities. The teaching methods and means are reformed and innovated to improve the teachers' knowledge reserves and lectures capacity, to improve the learning environment, to improve the teaching level and to improve student learning enthusiasm and the memory of knowledge, so that medical education in the process and results can be more good to meet the needs of development of the medical science and health services. The second class is the extension and supplement to the first class, and it more focuses on the medical students' ability. The educational function of the second class is well developed by hosting a series of activities,

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such as skill competitions, college students' science and technology innovation plans and the students' forums, and so on, to improve medical students' professional skills. In nearly two years, students in our school have achieved group award of the second national undergraduate clinical skills competition in East China, the third prize of the Second National Medical College and university students' clinical skills contest in finals group and the second prize of the third National Medical College and university students' clinical skills in finals group.

The first and second class together constitute an organic whole of the college education system. Their goals on education are consistent. They are complementary in teaching means and show convergence on teaching effect. The first class is the main body for educational system of colleges and universities, but it inevitable has limitations in session, content and methods. However, the second class can provide a positive and effective platform for students to enhance their professional skills by offering flexible scientific practical activities. The combination of them can improve the medical students' professional skills.

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医学院校大学生就业意向的性别差异研究*

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“十二五”时期, 中国宏观就业形势依然严峻, 就业压力进一步加大。毕业生能否顺利就业, 直接影响着毕业生对社会的认知和对人生的态度, 直接影响着社会对高等教育的认同程

度。本研究对医学院校在校大学生就业前景乐观程度、基层或偏远地方就业接受程度和月薪期望值等就业意向状况进行调查, 从而为社会制订相关就业政策、父母对子女进行性格

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