Research on the Hybrid Teaching Model of Human Morphology Based on the Concept of "MOOC+Flip Classroom"

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Abstract: Flipping classroom is a new form of education and teaching that sprang up all over the United States in 2011. It subverts the traditional classroom teaching mode and has become one of the hot topics in the innovation and development of educational informatization. The emergence and application of MOOC provides a fulcrum for classroom turnover. The teaching mode of classroom turnover based on MOOC provides a brand-new idea for promoting the deep integration of information technology and education and teaching. The author combines the experience of many years'curriculum reform with the organic integration of MOOC and flipped classroom in the teaching of Human Morphology, and probes into the application effect of the flipped classroom teaching mode based on MOOC in this course, aiming at discussing the new mode conforming to the medical education curriculum and providing theoretical reference for exploring the reform of the teaching mode of applied talents training course.

1. Introduction

Human Morphology is a professional platform course for nursing specialty. It is a morphological course integrating human anatomy, histoembryology and pathology. It has a strong theoretical and practical nature. It is also an introductory course for nursing specialty. Students'mastery of this course is directly related to the follow-up study of related professional courses. How to change the focus of teaching from "teaching" to "learning", "learning" to "teaching", and carry out the reform of teaching mode from the overall classroom view of "on-class + off-class", so as to give full play to the principal position and role of students, are the new "targets" of the current curriculum reform. The core idea of flipping classroom is to establish a systematic and applied talent teaching mode to cultivate students'abilities, to realize the transformation from focusing on knowledge imparting to focusing on the cultivation of ability and quality, to stimulate students' interest in learning and to improve students'learning efficiency.

2. Analysis of MOOC and Reversal Classroom Teaching Model

MOOC, as a "subverter of traditional education", has become a hot research topic in the field of education. It has become an important platform and way for many researchers to assist teaching and improve students'abilities. MOOC has transformed the teacher-led teaching mode into the student-led teaching mode supplemented by the teacher, which improves students'interest in learning and conforms to the idea of teaching students in accordance with their aptitude. However, there are more and more shortcomings in the booming development of MOOC. For example, Fred research shows that only 30 people continue to participate in 200 courses a week later, accounting for 15%. If the time is extended, the proportion will be lower. In view of the low completion rate of the course, some MOOC teachers employ network tutors to help students complete the course, but the pilot courses all ended in failure. In addition, MOOC fixed video content can not meet the needs of students for personalization is also one of its problems. Therefore, if students acquire knowledge through MOOC and ignore the importance of teachers, it is difficult to achieve the teaching goal of effectively cultivating and improving students'ability.

Flipping classroom is a new teaching mode in which teachers provide learning resources mainly in the form of teaching videos, students watch and learn learning resources such as teaching videos

before class, teachers and students complete homework answering, collaborative inquiry and interactive communication activities together in the classroom. As a major change affecting classroom teaching, the implementation of flipped classroom has significantly improved the quality of subject teaching and the quality of students'abilities. Whether MOOC or flipped classroom, its implementation should be supported by the network teaching environment and rich teaching resources. Based on the traditional teaching methods, combined with new technologies and concepts such as MOOC and flipped classroom, a hybrid teaching model based on MOOC and flipped classroom concept is proposed.

3. Design of Mixed Teaching Model

The student-centered teaching mode emphasizes the initiative of students rather than the compulsion of teachers. Teachers have also changed from the original classroom builder to today's instructors and facilitators. Considering the technical literacy and time and energy of the research team and other factors, under the guidance of MOOC and the concept of flipping the classroom, a mixed teaching mode for undergraduates has been designed to improve it. Undergraduates'learning efficiency, reducing teachers' pressure in class, and promoting electronic teaching. The mixing in this study refers to the mixing of pre-class learning, online platform communication and discussion, and classroom question-answering. Because there is a lot of work in the preparation and exchange of teaching resources, in this study, besides the main lecturer, there are two senior students as assistants, assisting teachers in answering students'doubts on the network platform, collecting students' opinions and suggestions, and completing the data collection of pre-test questionnaire and post-test questionnaire. After referring to many cases of flipped classroom, the learning resources provided for students are micro-videos, which are shared on the network platform one week before class for students'self-study before class. The main process of teaching implementation is shown in Figure 1.
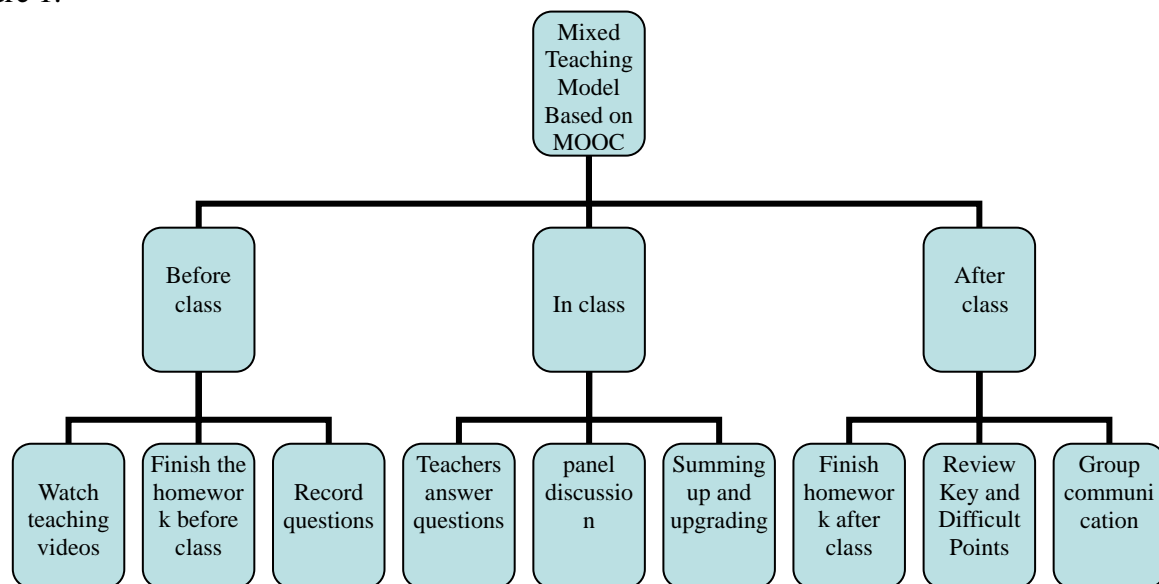

Fig. 1. Design of mixed teaching mode

4. Implementation of Reversal Classroom Teaching Based on MOOC

4.1. Self-regulated learning and watching videos

Guiding students to download Superstar Learning App using smartphones, Tablets and so on. Students are required to record important knowledge points and questions while watching micro-videos of each learning unit. At the same time, a self-test question bank based on Superstar platform technical support, including more than 1000 selected questions, can realize intelligent automatic or manual test paper generation, with corresponding answers and analysis. After

submitting the test, the system automatically counts the correct rate of the answers and the test results; it can also set the time of the pre-organized test papers on the mobile phone for classroom testing, and the test results will be included in the final evaluation results, in order to achieve the purpose of encouraging students to study independently. During the discussion and exchange of learning experience at any time and anywhere in the Learning Exchange Forum, teachers can timely grasp the students'learning situation by answering questions online, and incorporate common and key questions into the design of classroom teaching, constantly improving and updating the content of classroom teaching.

4.2. Strengthening experimental teaching

Human morphology is a subject of morphology. We should not neglect the advantages of face-to-face communication between teachers and students, situational teaching, flexible and intuitive teaching in traditional teaching mode. According to the learning situation and professional characteristics, we selectively strengthen experimental teaching in some chapters (such as motor system, viscera, vascular and nervous system), while midwifery specialty especially strengthens pelvis, breast, perineum and female genital system specimens and models. In addition, we are trying to make a two-dimensional code "digital" model with corresponding annotations and explanations, and upload it to the Internet as an assistant teaching resource for students to observe the three-dimensional structure of tissues and organs before, during and after class, so as to help students deepen their understanding of the three-dimensional structure of tissues and organs, and to provide students with enough autonomous learning space. This is the case.

4.3. Case Discussion Teaching

In order to cultivate students'abilities of problem analysis, problem solving and teamwork, we introduce cases related to nursing and midwifery to raise questions in class and then discuss them. We organize students to group and open cases to find answers, recommend students' representatives to speak, and finally the teacher summarizes and elaborates. The introduction of clinical cases should not only be closely related to the relevant teaching content of the course, but also be focused on, and try to avoid empty or excessive content, so as to prevent the case discussion from appearing irrelevant, general and all-inclusive phenomena. By introducing cases, students can connect theoretical knowledge with clinical diseases, promote the integration of systematic anatomy, topographic anatomy and clinical nursing anatomy, enable students to find learning methods in their interest, cultivate scientific thinking and innovative consciousness in discussion, thereby arousing students'curiosity and thirst for knowledge, and improve the quality of teaching.

5. Conclusion

With the application of new technology, teachers and students need to explore, communicate and experience constantly so as to find a more appropriate teaching mode, methods and means of human morphology, so as to make classroom teaching more effective. Teachers guide students to learn in class to promote the internalization of knowledge is still the core of teaching. Therefore, higher requirements are put forward for teachers. Teachers should not only have a sense of responsibility, but also have the ability of curriculum design. The whole process requires a lot of extra time and energy. Through teaching feedback, more than 80% of the students think that the application of the new mode of teaching reform of human morphology course highlights the training objectives of nursing and midwifery professionals, meets the needs of basic courses and clinical practice, and lays a good foundation for training high-end skilled applied talents to meet the needs of grass-roots medical and health institutions. We will teach and face the boring teaching of human morphology. Bed application is combined with various teaching methods and means to mobilize students'learning enthusiasm and achieve remarkable results. In the future, we need to think constantly and collect all kinds of appropriate teaching cases on the clinical front line in order to grasp more new knowledge of the needs of nurses and midwives, further improve and update the curriculum resources of human morphology, and explore more suiTable teaching cases. At the same

time, clinical front-line medical staff should be involved in the design of the course, optimize the structure of the teaching team, and continuously improve the overall quality of the teaching team by strengthening collective lesson preparation and professional learning.

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