

Application of flipped classroom in the teaching of basic medical curriculum for international students

Wendi Cai

Weifang Medical University, Weifang 261053, China.

Mail:oceanwendy@163.com

Abstract: The cultivation of international students has become an important part of medical education in China. Firstly, this paper summarizes and analyzes the main problems faced by international students in basic medical teaching and the current situation of international students' medical teaching, and puts forward that flipped classroom emphasizes students' self-learning consciousness compared with the traditional teaching mode. Finally, this paper explores and analyzes the construction principles and implementation methods of the flipped classroom teaching mode, and believes that the flipped classroom is a model suitable for international students.

Keywords: Flipped classroom; basic medical; international students.

1. Introduction

Compared with western developed countries, China has significant advantages in characteristic disciplines, undergraduate education quality, cost and language, etc.. More and more international students come to China for a medical education. It is imperative to improve the teaching forms and methods of international students to adapt to the medical education of international students.

Therefore, to find a more effective teaching model, stimulate foreign students' interest in learning, improve teaching quality and strengthen ability training, has always been the direction of medical teaching exploration for international students. This paper will deeply analyze the current situation of the teaching of basic medical courses for international students, explore the advantages of using flipped classroom teaching, and hope to help promote the teaching reform for international students.

2. Problems faced by international students in medical teaching

2.1 There are great differences between Chinese and international cultural backgrounds.

International students have different cultural backgrounds, religious beliefs and educational levels.

In the classroom most Chinese students are unwilling to show and highlight themselves in front of teachers and others. Teachers need to work hard to guide them to interact actively in class. At the same time, Chinese students often choose to consult teachers after class even if there are questions in class. Most foreign students grow up in individualistic culture, are more willing to express their ability, creativity and competitive consciousness, and pay attention to the realization of self-worth. Moreover, they generally have weak sense of discipline, weak sense of time, freedom and carelessness, and are often late and absent from class. The existence of this cultural difference often

interrupts teachers' teaching due to late arrival and early departure, which affects teachers' teaching plan and classroom organization. But on the other hand, this feature makes the class of foreign students extremely active, and students rush to participate in the interaction designed by teachers. In the process of interaction, they will also put forward reasonable suggestions on the teaching content and teaching methods of teachers.

2.2 International students have great differences in the basis of cultural courses.

International students come from different countries and regions. Due to different basic education levels and requirements in different countries, there are great differences in the basis of cultural courses among international students. Therefore, in the same classroom teaching process, how to arrange the teaching content and teaching progress requires careful planning by teachers. In addition, the differences in the basis of cultural courses of foreign students partly come from the large differences in their age, which also leads to the differences in the learning attitude and knowledge acceptance effect of international students.

3. Analysis on current situation of medical teaching for international students

Basic medical curriculum is characterized by many professional terms, large vocabulary, which makes students feel that there are many and complicated knowledge points, boring and difficult to master. These professional characteristics have always been the difficulty of medical education.

The traditional teaching model of basic medical courses is "teacher speaking student listening". This teaching mode is guided by teachers and controls the progress of classroom teaching. It has its own advantages, such as paying attention to the systematic teaching of knowledge, clear organization and prominent focus. If students can follow the rhythm of teachers and study according to the requirements, they will generally achieve better test results. However, the traditional teaching mode has exposed obvious shortcomings: With the progress of the course, the content gradually increases. There are a large number of professional vocabulary to remember in each class. Students' passive acceptance of knowledge is easy to make them feel monotonous and boring, and lose their enthusiasm and initiative in learning. Some students are less interested in acquiring knowledge, and pay more attention to "what to test and what not to test". The phenomenon of being late for class or leaving early gradually appears. Although we have installed teaching check-in software in each classroom, which is often checked by the class teachers of the Institute of international education, the effect is limited. Some students don't listen carefully after attendance, and even go to the classroom for attendance, and leave the classroom after attendance.

This model is easy to make students rely on teachers and do not take the initiative to learn. At the same time, due to the guidance of teachers, it limits students' intention of active exploration and is not conducive to cultivating students' ability to find and solve problems.

4. Flipped classroom teaching model

4.1 Concept of flipped classroom

Flipped classroom is a new model of classroom teaching organization, also known as "Inverted Classroom", turns the roles of teachers and students in traditional teaching to reflect the teaching concept of "student-centered". Teachers provide students with teaching materials (teaching

requirements, videos, PPT, etc.), and students study before class according to their own time arrangement, and then return to the classroom for teachers and students face to face discussion, exchange and learning. It has been implemented and promoted in many schools and disciplines abroad, and remarkable results have been achieved.[1,2]

It is a teaching model developed in recent 20 years. The original intention of adopting this mode is to make up lessons for absent students. With the popularization and rapid development of Internet technology, more and more courses begin to use the flipped classroom mode for teaching, which has achieved good teaching results.[3-6]

The flipped classroom teaching mode is different from the traditional teaching mode. This is undoubtedly in line with the characteristics of the relaxed learning atmosphere of "self-centered and free" for international students. Therefore, it is necessary to explore and analyze the construction principles and implementation methods of flipped classroom teaching mode, so as to find a flipped classroom teaching mode suitable for international students' teaching.

4.2 Construction principles of flipped classroom teaching model

Flipped classroom teaching mode requires students to learn by themselves with the help of network resources and learning materials provided by teachers before class, and then absorb and internalize the learned knowledge through communication and interaction with teachers in class. This learning mode breaks the traditional teaching mode of "learning knowledge in class and internalizing absorption after class", reconstructs the time series of knowledge learning and internalizing absorption, and transforms it into the mode of "learning knowledge before class and internalizing knowledge in class" [3].

Through this transformation, students' awareness of active learning has been further strengthened, and teachers have been transformed into instructors and mentors in students' learning process. Flipped classroom model does not only emphasize students' self-learning and weaken the role of teachers. On the contrary, because this model emphasizes the communication and interaction between students and teachers, it undoubtedly puts forward higher requirements for teachers' classroom design and knowledge reserve. In short, flipped classroom is to achieve the purpose of knowledge learning by stimulating students' self-learning consciousness and ability, and through the interaction between teachers and students.

4.3 Implementation method of flipped classroom teaching mode

The typical implementation method of flipped classroom teaching mode is: teachers record videos and publish them to the network, students watch videos and listen to explanations at home for knowledge learning, and then internalize and absorb knowledge by participating in the project interaction carefully designed by teachers in class. With the rapid development of mobile Internet technology, students' learning materials are no longer limited to the video materials released by teachers. More and more online courses have become resources for students' pre class knowledge learning and post class knowledge consolidation.

The key to the realization of flipped classroom teaching is good teacher-student interaction. The interaction between teachers and students is mainly completed in the classroom. After class and network are useful supplements to the interaction between teachers and students. In the process of interaction, teachers can teach students according to their aptitude and design different projects according to their learning ability and digestion effect, so as to gradually let more students participate in the interaction.

5. Advantages of flipped classroom in international students' Teaching

5.1 Flipped classroom emphasizes the dominant position of students

Flipped classroom fully takes into account the individual differences of students and provides learning materials to students in advance. Students can master the learning time and rhythm according to their own level. Especially students with poor foundation and weak understanding ability can watch courseware or videos repeatedly. If there are problems, they can communicate with classmates or teachers before class or discuss and solve them in class. In addition, most international students receive open education abroad, have a flexible mind, are willing to express their opinions, and the classroom atmosphere is active and heated. They can think about a problem from multiple angles, like to ask questions, and have good interaction with teachers. Using flipped classroom can make full use of this advantage, guide the collision of thinking and expand the breadth and depth of knowledge.

Students have changed from passively accepting the arrangement of teachers to relatively independently discovering, analyzing and solving problems, become the main body of learning, and improve students' attention to the curriculum. Teachers become the guides and promoters of students' autonomous learning. Through the pre class learning in the flipped classroom, the students' self-study ability is exercised and cultivated, and their ability to find problems and solve problems by searching materials and discussing with each other is also exercised.

5.2 Flipped classroom can cultivate team spirit.

Teamwork is very important in medical practice, especially in surgical departments. Although the flipped classroom respects the differences between students and gives students sufficient time for self-study, at the same time, the flipped classroom also emphasizes the cooperation between groups. Through the group learning and discussion in the flipped classroom, students' sense of cooperation of mutual cooperation and mutual help and team spirit can be cultivated.

5.3 Flipped classroom has higher requirements for students.

Flipped classroom is a new teaching mode, which has higher requirements for students. To do a good job in flipped classroom, both teachers and students need to do a lot of preparation before class. In the flipped classroom, students are the protagonist and center of the classroom and the leader of autonomous learning. Students listen carefully in class. They need to do a lot of homework before class. They should take the initiative to find problems and solve them as much as possible. In class, in addition to exchange and discussion, students should also be prepared to tell important contents. They should take the initiative to see and explain the specimens. Therefore, no matter before or during class, they need to invest a lot of energy to truly reflect the teaching concept of "student-centered", so as to achieve the purpose of flipping the classroom.

5.4 Feedback and evaluation of the final effect of flipped classroom teaching mode

The questionnaire survey will feed back students' opinions and improve teaching methods. A questionnaire survey will be conducted after each flipped classroom teaching to clarify students' learning situation and ideological trend. Teachers can make timely adjustments to the problems according to the survey results.

Use multiple modern communication means to communicate with students in time. Through QQ group and wechat group, we can grasp students' learning dynamics at any time, understand students'

ideas, collect students' suggestions, requirements and improvement opinions, optimize the details of teaching reform and improve the learning effect.

6. Areas that need to be strengthened and improved

With the deepening of globalization, the proportion of medical overseas students' education is bound to increase year by year. Therefore, the innovation of international students' education mode and learning style in Colleges and universities should be gradually accelerated. In the future work, on the one hand, we should further improve and enrich teaching resources and constantly update PPT and teaching videos; Introduce English test question bank to realize in class test; Refine classroom scoring standards. On the other hand, pay more attention to the beliefs, language, clothing, physical habits and taboos of international students in different regions, and group them more scientifically and reasonably; Introduce Chinese culture and customs to international students so that they can better understand China and integrate into the surrounding environment, which is conducive to their study and life in China [7]. The research of flipped classroom also needs to be improved in the future teaching practice in order to play a greater role.

References

- [1] Fleagle TR, Borcharding NC, Harris J, et al. Application of flipped classroom pedagogy to the human gross anatomy laboratory : student preferences and learning outcomes[J]. Anat Sci Educ , 2018,11(4):385-396.
- [2] Day LJ. A gross anatomy flipped classroom effects performance, retention, and higher- level thinking in lower performing students[J]. Anat Sci Educ.,2018,11(6):565-574.
- [3] Rao Yunbo, Deng Jianhua, Jehoiada Jackson. Appication of android programming in flipped classroom [J]. Experiment Science and Technology, 2017,15 (06): 100-102,106.
- [4] Ngoc Thuy Thi Thai, Bram De Wever, Martin Valcke. Face - to - face, blended, flipped, or online learning environment? Impact on learning performance and student cognitions[J]. Journal of Computer Assisted Learning, 2020,36(3): 397-411.
- [5] Hui Chen Lin, Gwo Jen Hwang. Research trends of flipped classroom studies for medical courses: a review of journal publications from 2008 to 2017 based on the technology-enhanced learning model[J]. Interactive Learning Environments, 2019,27 (8): 1011-1027.
- [6] Li Dong, Yang Wei, Yuan Hongyan,, et al. Initial study on literature reading based flipped classroom style teaching applied in Medical Immunology classes of MBBS students[J]. Chinese Journal of Immunology, 2021,37(15):1887-1889,1894.
- [7] Li Yan, LAN Xueping, Hou Fanxing, et al. Enhancing Clinical Skills , Emphasizing on Humanities , Creating Characteristics, Serving Silk Road Medical Education: Taking the Clinical Teaching Reform of International Clinical Medical Students from Xi'an Jiaotong University as an Example[J]. Medical education research and practice, 2019,27 (02): 235-238.