## A new exploration of the flipped classroom of systematic anatomy

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**Abstract:** in recent years, new teaching reform mode is common, and more and more are applied in teaching work. However, different teaching reforms achieve different goals. As long as the reform mode can achieve high-quality teaching effect, it is the pursuit of teachers. At present, we should consider whether different reform models can be integrated with each other. After the integration, we may get the ideal teaching effect. Therefore, teachers should put forward more innovative teaching methods. We should make rational use of different teaching reform modes to make teaching achievements to a higher level.

Key words: CBL case teaching; Flipped classroom; Teaching reform; Systematic anatomy

## Introduction

Based on the analysis of the traditional CBL case teaching mode of regional anatomy adopted by the freshman medical imaging technology major and the sophomore clinical medicine major in our college, the CBL case teaching implemented in our college is mainly based on students' performance and explanation, and the teacher is responsible for listening and analyzing the score. This mode greatly improves the length of students' participation in classroom teaching, fully mobilizes the enthusiasm of students' learning, and helps to consolidate the knowledge points related to regional anatomy. Combined with professional characteristics, this model often uses typical and simple medical records. The specific implementation method is as follows: prepare a number of medical records, divide the students into a group of about 10 people and divide them into several groups. Each group selects a representative to draw the medical records, and is responsible for deducting and explaining which medical records are drawn. The team members need to cooperate with each other and perform their respective duties. The teacher will give the team members a week to prepare. During the preparation period, the team members need to be familiar with the relevant knowledge points involved in the regional anatomy, and also need to find a large number of clinical knowledge points, design the medical record script, prepare the performance and explain the props, etc. one The team leader is responsible for the division of labor: determine the performing members among the team members, memorize the script, lines, actions, etc., and cooperate with each other to meet the requirements of vividly interpreting the medical record script. The content of the script can involve judging the clinical symptoms, analyzing the condition, and even the treatment methods. Self made props can be used to assist the performance. Self made props can also reflect the students' attention to this teaching method, and indirectly understand which students are the beneficiaries of this teaching method. However, CBL case teaching, after all, involves a large number of relevant clinical knowledge points, which is difficult for freshmen or sophomores of undergraduate course, because there are many clinical related professional diagnosis, treatment and operation in medical records.

- 2. in addition to the performance of medical records, the focus is to explain the medical records. Before the explanation, it also needs to fully consult the data. The team members other than the performance of medical records are responsible for this work, or there are some students with strong abilities who can also hold several positions. Of course, some team members have not participated in any link from beginning to end, and have made no contribution to CBL case teaching. Students with strong ability and good explanation may participate in the explanation, or they may be silent. This phenomenon directly leads to the inability to find students with real self-study and strong expression ability. However, after several rounds of reform, there were surprises, and it was found that some students who performed better played an important role in the process. Explaining the medical records is the key play in CBL, with students who are completely out of manuscript and explain smoothly; There are also students who often focus on textbooks and follow the book. The two types of students get different gains in CBL case teaching. We have also noticed that students' usual task is only to listen to the class. It is difficult to let them lecture on the platform like teachers. Therefore, the scoring standards and requirements for the explanation of medical records are not high. Teachers will also distribute the scoring standards to each group in advance to prepare and explain according to this standard. This process also reflects the students' ability to understand and practice the requirements of the standard. Only when they are really explained can they fully display their advantages. Students are required to be fully prepared if they want to reach the ideal explanation standard.
- 3. the biggest tacit understanding of any group work is participation and cooperation. After several rounds of reform, we found that during the implementation of the CBL case teaching mode, students constantly reflected that individual students often did nothing in the preparation process, but because they were team members, they could share the fruits of other people's work. On the one hand, this situation was not conducive to the unity between students, on the other hand, these students did not participate in the CBL case teaching mode, This reform means nothing to them, so teachers must personally emphasize that every student must participate in it, otherwise it will affect their final evaluation. As long as the total score is involved, most students can pay attention to it.
- 4. the teacher is responsible for commenting on the students' play and explaining the advantages and disadvantages. In the process of students' performance and explanation, teachers should be good at discovering the advantages and disadvantages of each student, instead of blindly praising or pointing out the shortcomings. In fact, each student has its desirable advantages. Even if it is a trivial memory point, students should also be encouraged, and the shortcomings should also be pointed out in detail. Only in this way can students correct them in

time, and then they can be better than each other. As a teacher, we should not impose the strictness of teachers' class on students according to our subjective consciousness, which will make students breathless. Too much pressure is not conducive to the performance and explanation of the next medical record. In a word, it is our common goal to distinguish the primary and secondary relationship between teachers and students, emphasize the importance of the process, accumulate the results of each performance and explanation, and make full use of the advantages of CBL case teaching to better serve the teaching of regional anatomy.

This teaching reform is to combine CBL case teaching method with flipped classroom and apply it to the teaching of systematic anatomy. 1. Take the advantages of the two teaching modes and fully integrate them to maximize the advantages of this innovative teaching. "Flipped classroom" is not unfamiliar to us, because many colleges and universities have been using it all the time. Under this situation, it has increased the difficulty of innovation. Although "flipped classroom" belongs to "ancient method", once integrated into CBL case teaching, it is equivalent to injecting "new method", which makes this teaching reform unique. The innovative method also emphasizes that students' explanation is the main method, and teachers' comment and analysis is the auxiliary method. We should not blindly reform and forget the original intention, but we should not blindly use the old methods to make teachers and students lose their freshness, so the reform focuses on the "new". After the reform, we need to see the results, but we cannot accomplish it overnight.

1. in order to obtain good reform results and find out the shortcomings in the reform, two rounds of experiments will be carried out in this reform, and the same major will be selected to help judge the effectiveness of the reform. The reform object is only one class of nursing major, and the other classes of the same major are the control group. Because the reform is aimed at freshmen majoring in nursing, and the subjects studied in freshmen are only basic medical courses, the medical record setting should be as simple as possible. Although it involves clinical professional knowledge, the content selection is relatively simple, and there are few professional terms involved. This setting helps to narrow the scope of data access, Reduce the understanding difficulty of the interpreter and listener. The medical records are not complicated, and closely follow the knowledge points of systematic anatomy. According to the key points and difficulties of nursing students' future work practice, the setting of medical records was carried out. For example, medical record: if there is air in the infusion pipe, is it necessary to discharge it? If not, where will the air enter? Such a simple medical record is very common in clinical operation. The medical record is simple and the questions are straightforward. It closely follows the important knowledge points of "cardiovascular system" in system anatomy. 5. As long as students are willing to look for information, they will generally answer, and the situation is the same as that encountered in their actual work, which can better stimulate students' interest in learning, More actively encourage students to participate in teaching reform. The setting of medical records does not emphasize "detail" and "difficulty", and does not emphasize the substitution of clinical professional terms and laboratory examination index data, which will only increase the difficulty and make students feel tired. But the medical record must be a "difficult problem" often encountered in practical work in the future, and it must involve the knowledge points of systematic anatomy.

2. how to fully mobilize the participation of each student? How to make every student learn knowledge in the process of reform? These two issues are the key issues to be solved in this reform. It is also the disadvantage exposed by the CBL case teaching reform mode used before. Therefore, the reform is also based on students' explanation, but the difference is that in order to let every student participate in the reform mode, the explanation is not based on groups, but on individuals. Every student has the opportunity to participate, and this opportunity is random and unpredictable. This avoids the behavior that some students do nothing and mix in the group to make up for the number.

3. the following is a detailed explanation of the reform mode: (1) the method of drawing questions is also adopted. The preparation time is one week. A week before the explanation, several students are randomly selected from each laboratory to draw medical records (Note: a class is divided into four laboratories, and the teaching reform is carried out in the experimental class.), The extracted medical records will be published immediately so that every member of the experimental group can know it. The students of the experimental group will consult the data, make props before the explanation, and prepare for the explanation, etc. on an individual basis. They are all carried out independently. Because the medical records are simple, the students will not be too nervous, and the preparation burden is small. (2) The preparation process is as important as the explanation process, emphasizing the enhancement of students' practical ability. As a morphological course 4, systematic anatomy involves a large number of anatomical pictures. If students can draw their own pictures or make simple models to help explain, extra points will be added when scoring. At the same time, students can also use the specimens, models and pictures of the laboratory to explain, which urges students to carefully attend the experimental class and be familiar with the pictures, specimens and models of the laboratory, otherwise they cannot make full use of the existing props in the laboratory. (3) "Commentators" are randomly selected, and each student is ready to explain the same medical record, so the teacher's task is to randomly select commentators in the experimental class, and comment on and analyze the interpretation results. Because of the emphasis on "random", each student can not avoid being called to the name. It is possible to "turn" to explain by themselves and explain independently. There is no time limit for the explanation process, but because the medical record setting is relatively simple, the explanation time of each student can be controlled within 5 minutes. In such an experimental class, 10 or more students will complete the explanation, and there are four experimental classes in total, so basically every student has the opportunity to explain on the podium. 3. This makes the scope of this reform involve every student, and can make every student gain. (4) After the explanation, the teacher comments. The teacher's comments do not emphasize much, but emphasize details. The content of the comments depends on the expression of the students. Some students understand but can't express themselves. In fact, it's easy for teachers to find this kind of situation from the perspective of professional explanation, which requires teachers to actively and fully guide, emphasize the knowledge points of medical records, and understand the knowledge points by themselves, You should also use simple

and easy to understand language to make others understand, which can be expressed through examples, personification and other techniques. Even for nursing majors, there are many opportunities to communicate with patients in the future. Patients do not have the foundation of medical professional knowledge, so there will be doubts about some treatment methods. At this time, most of the time, nurses are docking. In order to gain advantages in doctor-patient communication, nursing students should learn from campus, It is very necessary to cultivate and establish ways and means of communication with patients, which is to reduce and avoid doctor-patient disputes.

The new model of this teaching reform is a combination of two different models at the same time. In the future, if there are appropriate conditions to support it, it can also be applied to stomatology or clinical medicine, and even to all majors.

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