The Application and Experience of WeChat Enterprise in the Teaching of Biochemistry Course

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Abstract: This paper introduces the process of WeChat enterprise in the auxiliary teaching practice for improving the effect of education teaching, and promoting students' role. For example as biochemistry course, combining with teaching experience, summed up the practice and experience of biochemistry teaching and the problems in the practice by WeChat enterprise was applied, based on this, the auxiliary teaching needs and advice of the enterprise were put forward.

Keywords: Enterprise; Biochemistry; Application; experience;

INTRODUCTION

With the development of information technology, human beings have entered a learning society, which requires students to transfer their traditional learning knowledge to learn how to learn. Students have to communicate and discuss in various ways to gain learning experience. This also requires teachers to change their teaching methods from teacher-led to student-oriented, to give full play to students' subjectivity, and to meet the needs of different subjects of students. The network teaching not only can carry out social interaction, but also can carry out individual interaction, and have extensive interaction, from the excellent course to the network open class then the MOOC, using all kinds of network teaching platform is increasingly showing its superiority in teaching methods, many teachers in the teaching process are generally used modern means of teaching such as the mailbox QQ, WeChat and so on. As a new medium of information communication, the application of WeChat public platform is more and more convenient in teaching. By using WeChat enterprise number assistant biochemistry course teaching, the author points out some teaching experience of WeChat business number used in the course assisted teaching, summarizes the problems encountered, and puts forward the development needs and suggestions for WeChat teaching in the future.
1 Practice Process
1.1 The initial operation of the enterprise platform number

First of all, the teacher or administrator of should complete the background setting of the content of the platform address book before the class, according to the needs of teaching and management, the members are classified by class, and members are required to fill out personal learning numbers, classes, posts, names, personal cell phone numbers, micro signals and other information, then export the set up contacts template to fill in to teachers after class. After the teacher introduces the student information from the background, the system will send the enterprise QR code to the students, the students can scan and follow and check the platform content at any time after the successful verification of the mobile phone number.

In order to meet the teaching needs, the teacher divides the contents of the enterprise number platform into four main modules: (1) Resource sharing area: the contents include basic syllabus, progress and teaching materials. At the same time, in order to increase the students' interest in learning, the teacher will also edit or process expansible knowledge that is easy to understand and video links in each chapter; (2) Counselling answering area: in order to facilitate the filing and arrangement of the contents of the tutoring and answering questions, students are required to submit questions to the background through the terminal in the area. The tutoring teachers need to check in time to reply in time. The form of answering questions is the form of text submission, which is a way for students to respond to teachers one by one. Teachers can give students one to one, common problems, and send information uniformly, which is one to many. (3) Interactive communication area: according to the plan, more than one discussion theme is preset according by the average chapters of the teaching content, but in order to improve the effect of the discussion in the actual communication, 3-4 can be discussed at most on each semester. As a result, there are two first-level menus under the block, named "discussion topics" and "discussion references", in which up to five thematic topics can be arranged, while discussion references provide reference texts relevant to the topics discussed for students to learn after class. When the corresponding chapter is complete, it will remind students to pay attention to the corresponding project topics, then the students group themselves, eight people in each group. After class, each of them consulted relevant information. Then, WeChat group (discussion group) was established through platform enterprise conversation, and group discussion was adopted to explain the views and submit chat pictures. (4) Homework submission area: for each chapter, at least two exercises are arranged, and the time for writing homework is required to be submitted within four days after the assignment, because of the tight time, to a certain extent avoid plagiarism among students. And students in writing homework to make full use of network resources for supplementary learning.

1.2 Operation Feedback and Improvement of Enterprise Number Platform

At the first run of the platform, the control class and the experimental class were set up. Although the content is the same; for example, courseware upload control class is sent to the class QQ, interactive communication topics are discussed online, answer questions online, the work is submitted in paper, but there's still no real monitoring of the interaction below the line. The courseware can't be provided in the form of pictures and texts that highlight the important and difficult points, and it is found through the questionnaire that the enthusiasm of
the control class to participate in the platform is also relatively high. Therefore, considering the different teaching methods, the participation of the platform content is not regarded as the standard of the ordinary grades, but some exercises and interactive communication content are taken as the final exam content to reflect the difference between the study and the non-study.

Through the questionnaire survey after the first operation, the students put forward several opinions and suggestions on the teaching of enterprise platform, which will be perfected when running again: (1) Wish to enrich the content of the resource sharing area; (2) Tutoring can't be done anytime, anywhere; (3) Job submission is too limited by file format; (4) Except data traffic needs to be used to access the platform through WeChat outside the dorm, hope the school will be able to cover WiFi.

1.3 Secondary Operation of Enterprise platform

For the sake of fairness, the scope of the biochemistry course assisted by Enterprise number will be extended to full participation in the new semester. Each student should follow the enterprise number platform, which the content of the platform will be linked to the final grade, and the participation degree of the platform will be linked to the usual results. The platform content will be set closely around the major and difficult points of the course and will be part of the final exam volume. The platform has a high degree of participation, high interest in learning, good learning effect and natural high achievement, which greatly improves students' enthusiasm and initiative in learning, and makes the use of the platform more direct.

In view of the students' opinions and the teachers' experience in the management of the platform, the teacher updates the contents of the platform, and sets and fills the lower and second level menus of each module (area). Among them, there are three first-level menus of "in-class resources", "extra-curricular resources" and "post-graduate examination resources" in the resource-sharing area, which increase the common sense content of students' interest. For example, trans fatty acids in foods, the price gap of vitamins, the formation of silk, the principle of hair waving, and so on. Extra-curricular resources have increased the "three carboxylic acid cycle", "ATP synthase", "collagen application", "earthquake rescue" and other classic video and text resource links. In addition, teachers collected some postgraduate entrance examination materials from Baidu Netdisk to share the platform. Students can download and save the corresponding postgraduate entrance examination data through the "postgraduate entrance examination Resources", which is very convenient. Since the beginning of the use of the platform a little bit of "touch the stone across the river", the details of the platform's operation were not well understood, especially by students who were not familiar with the operation and often made mistakes, such as using the wrong modules. As a result, the teachers drawn up detailed instructions for the use of the platform in advance, clear the use of each module, as well as points for attention, assessment standards, set up the monitor as the internal administrator, use "Mobile Management Assistant" in a new way, authorize it to send online attendance and member approval information, which it is convenient for teachers to manage students and platform content, in particular, the editing of the graphic text can not be sent from the computer terminal to the backstage, and the use of the mobile phone can be realized.
In order to overcome the problem that communication is not timely, the second run of the use of counselling answering areas has made a big adjustment, from "place" to "enterprise conversation". Teachers establish a session group in each class, so students can ask questions in the group, and also can be combined with WeChat case and private teacher.

In order to overcome the problem that communication is not timely, the second run of the use of counselling answering areas has made a big adjustment, from "place" to "enterprise conversation". The discussion of interactive communication using the WeChat chat function needs the group leader each time which adding all members of WeChat is more troublesome. In addition, teachers can only see the nicknames of students when evaluating their grades, ignoring this small detail also adds a lot of trouble to the follow-up. Therefore, the enterprise number once again runs interactive communication changes in the enterprise conversation, avoiding the above two aspects of inconvenience. The discussion of record submissions can be submitted in picture form to interactive communication area, and can also be made up of WeChat's chat recording and sorting function into microtext. You can merge by right mouse button→Collect→Enter the interactive area→Send a collection of chat records.

In order to solve the problem that the submission form of homework is limited by the file format, the teacher summarizes the file form that can be submitted, and explains it to the student in the instruction of use. In addition, in order to increase students' knowledge development outside the classroom, the teachers arranged at least four extracurricular learning. Students need to submit related links, pictures or micro texts of Biochemistry knowledge to job submission area. This part of the content teachers will select the essence of the material library to promote the construction of the platform. The teacher can also internalize the good content, which it can promote teaching by learning and benefit teachers as well as students.

2 Teaching Experience
2.1 The main role of students can be brought into play

Biochemistry course is one of the required basic courses for biopharmaceutical and biotechnology majors in our college. It is also recognized as difficult to learn, difficult to teach and difficult to memorize. In the traditional teaching mode, the teacher is the leading person and the arbitrator in the teaching process who plays a leading role. Students are passive recipients of knowledge and have no say. In the teaching process, the implementation of synchronous teaching, the whole class walked in unison, which this way neglects the students' interest, ability and learning level, they can't really teach students in accordance with their aptitude. Moreover, the communication between teachers and students is limited in the specified time and space, often limited to the one-way communication from teacher to student, and the opportunity of communication and cooperation between students and students is also lacking. The main body status of the students can not be fully displayed and the subjectivity cannot be fully displayed. Therefore, WeChat was applied in biochemistry teaching. By establishing WeChat teaching platform, a bridge of communication between teachers and students, students and students was established, creating an atmosphere of independent learning. WeChat enterprise as a tool of course teaching, enables students to effectively use WeChat, puts their energy from entertainment to learning; lets the teachers at any time, real-time communication with students everywhere, understands the students'
learning problems and timely answers to problems and effectively adjust teaching content, and improves teaching methods greatly improve the biochemistry course teaching effect.

2.2 The content of teaching is enriched

Biochemistry knowledge has a wide range of applications and a large number of contents, and there are very few contents that can be presented in class alone. Through the construction of enterprise number platform, it set up a complete courseware material library in the resource sharing area, reproduced and produced multiple video files and more than twenty pictures and text teaching materials to assist teaching; more than 40 quizzes have been formed in the area of tutoring and answering questions, and the common problems have been highlighted and explained in the teaching; eight topics of discussion have been set up before and after the renewal of the interactive exchange area. The students use the time after class to consult and organize the materials to form their own views, which is undoubtedly a deepening and supplementing of the theoretical knowledge; more than 30 homework questions were assigned in the homework submission area, and a problem bank was set up for students to learn. At the same time, it includes students' learning contents or links related to biochemistry that are freely learned and arranged in their spare time, which help and extend classroom teaching contents.

2.3 With more interaction, the teaching effect can be improved.

The role of students in biochemistry teaching is fully brought into play by the enterprise platform, which can be fully reflected in the tutoring and answering questions and interactive communication links. For example, one of the interactive exchange topics, "the principle and application of Marinated Tofu and lactone tofu", the students' interactive exchange program is well done, and the discussion is quite adequate. It can be said that from the principle to the experimental steps, the application effect is very perfect and ideal. The effect of combining theory with practice is far more than the experimental effect without interactive communication in the past. In the experiment, everyone made tofu up to the edible standard, without a single failure, the final exam on the knowledge of heavy metal salt precipitation points basically had no wrong answer.

3 Problems encountered in the Management of Enterprise number platform

After two semesters of the platform running, it can be said that the enterprise number platform as a biochemistry course auxiliary teaching effect has been shown, especially in the students' learning enthusiasm to improve the effect is remarkable, which students have begun to shift from passive learning to autonomous learning and collaborative learning which students have begun to shift from passive learning to autonomous learning and collaborative learning. Due to the sharing of more resources and the expanding learning of network resources, the students' ability to internalize the knowledge points of the course and to understand and apply them in depth has gradually improved. This is what the author has learned by communicating with the students in the teaching process. However, it would not be sufficient to consider only the level of participation of the platform, although it would provide some indication of the auxiliary effects of the platform, for the following reasons: (1) From the perspective of students sharing resources, because our WeChat platform has no
callback mode monitoring on student visits, we can not see each student's participation; (2) The interactive exchange record process only sees the final discussion link, its preparation situation before, the knowledge internalization situation can not truly reflect, therefore in the peacetime performance in the given can not distinguish who is good which is bad, the examination standard is not perfect. (3) Some of the contents of the platform, especially the key contents related to the examination, will also be emphasized by the teachers in class, so the effect of the platform is not good to be evaluated solely from the test results.

4 Development needs and suggestions of Enterprise number Auxiliary Teaching in the Future

From the problem of enterprise platform itself, WeChat's "business number" is newly launched after the subscription number and service number. With the improvement of function, the operation effect is also improving. But for the time being, we have chosen the enterprise number to meet most of the teaching needs, and there are several aspects to be improved: (1) Since each module is equivalent to a service number, the first level menu can be set up to three, and the two level menus can be set up to five. This is obviously not enough, and hopefully the platform will increase the number of menus in the future. (2) Menu content can only be self-made graphics and text or other website resources; the form of use is also restricted. In addition, the retransmitted pictures and texts cannot be saved to the material library now, and the construction of the material library is also limited to some extent. In order to satisfy the need of teaching cycle repetition, it is more troublesome to retransmit. In the future, it is hoped that the platform will be able to add the saving function of non-self-made graphics and text. (3) The video files that can be uploaded are too small. Teaching video that is usually large can't be uploaded on the platform. When making video by yourself, if you do not have your own server storage, you can only forward the link of network resources for students to learn. Hope that the platform will expand the size of the uploaded video files and the format of the file. (4) Homework submission, interactive communication and other forms, if they can be submitted in the form of word in the future, it will be convenient to facilitate the preservation of content, material library construction and performance assessment. In addition, in order to meet the needs of construction of assessment and material library, the storage time of WeChat platform will be extended to one semester or longer. (5) In order to grasp the overall effect, including classroom teaching, there will be an increase in online examinations of peacetime scores in the future. Previous stage tests have not been able to achieve one or more volumes per person or more, which the examination time is consistent, the content is consistent, the form of examination is single, the workload of examination paper is large, the workload of evaluation is large. In the future, we will increase the use of all kinds of assessment marking software for WeChat third parties, and strive for random test papers, random tests, high efficiency tests and rapid assessment. In addition, the third party application of the platform has yet to be developed and utilized. For example, attendance is very powerful. In the future, if the school WIFI is fully covered, students will be able to view the platform content whenever they are connected, and their attendance and early departure will be automatically monitored in and out of classes. We believe that with the perfection of WeChat business function, it will be more widely applied to teaching. The teaching effect of using enterprise platform to assist biochemistry course will be greatly improved.
5 Conclusion

Through the teaching of WeChat enterprise assistant biochemistry course, it fully mobilized the enthusiasm of teachers and students in the two party teaching and learning, promoted teachers' teaching effectively, and formed more effective teacher-student interaction between teachers and students. At the same time, students more actively participate in independent learning, actively seek knowledge, students can also better communication. Classroom instruction and knowledge expansion complement each other, which is helpful to improve the teaching effect. Although the application of WeChat enterprise in teaching can not fully meet all the needs of teaching, we have seen the great prospect of application in teaching, we believe that through improving the function of WeChat enterprise and more third party applications, it will be widely used in teaching more courses.

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References