The Current Situation of Medical Information Retrieval Teaching under the Background of MOOC

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Abstract. The full name of MOOC is the massive open online course. The platform system of medical information retrieval and utilization resource base based on MOOC can realize online learning, examination, information release and other functions. It helps to improve students' information literacy, reduce teachers' workload, improve teaching efficiency and promote teaching reform.

Keywords: MOOC, Medical Information Retrieval, Teaching

1 Introduction
The full name of MOOC is the massive open online course. It has no restrictions on the classroom size and the number of learners, no restrictions on time and space and threshold, which is open to all[1]. Medical information retrieval is an important basic course for medical students to develop their information literacy, which is significant for them to clarify information needs and cultivate information acquisition, evaluation and utilization skills. Based on Internet, desktop or mobile terminal, and breaking through the traditional classroom time and spatial training mode, MOOC learning has become a necessary trend of medical information retrieval teaching. If medical information retrieval course can rely on MOOC platform, it will benefit more medical students.

2 The Influence of MOOC on Medical Information Retrieval Course
Medical information retrieval course is a comprehensive subject, and its teaching is an important link in the teaching system of medical students, as well as a tool course to improve their ability of independent learning and research [2]. The influence of MOOC on medical information retrieval course is gradually shown.

MOOC can effectively promote fair competition and encourage teachers of medical information retrieval teaching to improve their teaching level and promote teaching reform. Apart from solid professional knowledge to respond to students' questions in online classroom communication, teachers should also have certain information technology capabilities. Besides, teachers should carefully design the relevant teaching content of MOOC to promote students' learning efficiency. Moreover, MOOC also has a certain impact on students. It has no restrictions on the classroom size and the number of learners who are highly mobile. The teaching of medical information retrieval course has fixed teaching site, facilities, and limited learning threshold; The open sharing and online learning features of MOOC make
learning more flexible. Learners can get rid of the above restrictions and can self-help learning as long as they register online. Most medical information retrieval classes adopt the teaching mode of knowledge indoctrination, and the students' learning autonomy is not strong; However, MOOC is a student-centered teaching. Students obtain knowledge through independent learning and interaction with other students and teachers, while teachers mainly play the role of inspiration and guidance.

3 Teaching Reform under the Background of MOOC

The background of MOOC brings new challenges to the teachers and students of medical information retrieval course. To adapt to the impact of MOOC tide and the improvement of educational technology, medical information retrieval teachers should clearly know the new development of international open educational resource, guide students to update their learning ideas, cultivate their ability to independently seek for learning resources and develop themselves, and update their current knowledge structure and level. Meanwhile, teachers should actively learn new educational technology, and timely add the latest educational technology into their own professional knowledge system, so as to be qualified for the teaching under the new situation. Under the background of MOOC, these teachers should master the professional knowledge of medical library and information, have strong computer application ability, high foreign language level and rich practical experience, and know well the relevant subjects. Teachers must constantly learn and update their knowledge structure to meet students' need for knowledge and cognition [3]; They also need to constantly acquire new teaching skills and methods and receive targeted re-education so as to improve their information literacy. Besides, teachers must be transformed from simple "professors" to collectors, processors, and converters of teaching information. They must search and browse a large number of websites and books related to teaching, and make small videos for the teaching of the medical information retrieval course, and track the interactive learning of learners. This includes the interaction between students and teaching materials, and the interaction between students to meet their needs for learning anytime and anywhere.

In the traditional teaching process of medical information retrieval, students are the recipients of knowledge. In most cases, they are passive learners with low interest in learning and low learning efficiency. By learning from the openness of MOOC, we can integrate high-level domestic and foreign medical information retrieval courses to help students understand the content more deeply and fully. Students can also choose other related courses based on their interests or development needs to build a more complete medical information retrieval knowledge system. In this teaching process, students are learning subjects. With the interaction of MOOC and the learning environment elements like situation, collaboration and conversation, students can fully play their initiative, enthusiasm and innovation, so that they can truly become learning subjects and cultivate their independent learning ability [4].

Medical information retrieval course has many teaching contents and less class hours. Traditionally, the "full class" teaching mode is adopted. Teachers instill a large number of knowledge points into students in each class. Students have no time to digest, and the classroom lacks vitality. Students' learning enthusiasm is not high, and the teaching effect is not ideal. At present, some colleges and universities in China have explored the reform of "flipped classroom" teaching mode based on MOOC for similar courses [5-8], although some teaching results have been achieved, it is not easy to operate in practice and is difficult to promote. For example, most of these "flipped classroom" require students to spend more time for preview before class, and the class time is completely used for group discussion, special topic research or teacher-student interaction. However, as a public course, medical information retrieval is generally taught in large classes, so group discussion is difficult to implement in classroom teaching; Moreover, medical students have a heavy learning task of professional courses, and the learning energy that can be allocated to non professional courses before and after class is limited, which makes the popularization and application of "flipped classroom" teaching mode difficult to implement.

Therefore, different colleges and universities are exploring the teaching mode of medical retrieval under the background of MOOC, and construct the teaching activities and assessment methods that the two roles of teachers and students need to complete before class, in class and after class, so as to
integrate the process of knowledge transfer and knowledge internalization into classroom teaching, and reduce the pressure of students' learning and examination before and after class.

4 Advantages and Disadvantages of MOOC Teaching

The medical information retrieval and resource base based on MOOC can achieve the same teaching effect as the traditional teaching method. Meanwhile, it has many advantages that traditional teaching does not have. Firstly, the resource base can choose the corresponding curriculum combination according to different majors, so as to realize individualized teaching and improve teaching efficiency. Moreover, the open sharing and the online learning features of MOOC make learning more flexible, and learners can get rid of restrictions of places and time [9]. Students can use their spare and fragmented time to study the course repeatedly. Secondly, the teaching method is changed from the traditional lecture teaching to students' self-learning, supplemented by teachers' guidance, which can mobilize students' independent learning ability, instead of instilling knowledge, so the learning effect is better. Besides, using WeChat as the main Q&A method can shorten the distance between teachers and students, and students will more bravely communicate with teachers in the virtual network. During the teaching implementation, it is also found that there are still some students with low learning enthusiasm, which causes their unsatisfactory performance. This is related to classroom design, students' learning ability and learning interest.

MOOC also has some shortcomings, mainly in the following four aspects. Firstly, the network-based learning lacks supervision mechanism compared with traditional classroom. Secondly, some students lack feedback on knowledge acquisition during the courseware learning. For this, a classroom test can be inserted into the video at a certain point in the website design, so that students can timely understand the mastery of the knowledge points. In this way, teachers can also understand the general grasp of a certain knowledge point in the background to facilitate centralized answering questions. Thirdly, the content of homework submitted by some students is similar. How to solve it in the future through IT technology needs further exploration. Fourthly, the present platform system is mainly compatible with PC terminal. In the future, the research, development and design of mobile terminal teaching website can be added to make teaching activities more flexible and further improve the platform system.

5 Current Situation of MOOC Education at Home and Abroad

There are 25 online education platforms in foreign countries. Although MOOC construction platforms are increasing, udacity, EDX and coursera are still in a tripartite situation with technical support and resource advantages. Coursera charges fees based on professional certification, security assessment, manual counseling and advertising sponsorship, and the course operation is paid by enterprises; EDX charges mainly rely on professional certification; udacity's profit comes from corporate sponsorship fees, such as helping Google and Autodesk to publish training courses, so as to earn some fees. These platforms rely on the open concept, advanced technology, broad fields and high-quality resources to improve the quality of the whole people through online training, so that more learners can participate in it and experience the education concept of "opening and sharing". Foreign MOOC courses are from the world's top universities, providing a large number of high-quality curriculum resources. With cooperative development mechanism, shared resource framework and real-time interactive system, MOOC establishes high-quality and rich teaching resources, integrates online forum and real-time chat, and communicates through posting, private message and @ etc[10].

The MOOC platform in China is also becoming more and more mature. The construction of MOOC platform and the establishment of MOOC alliance of China's medical education have attracted nearly 200 companies, covering almost all medical colleges and universities in China. Through the construction of MOOC platform and high-quality courses in China's medical education, we have implemented the spirit of open and shared Internet, designed curriculum modules that are easy to communicate, question and answer, and build a bridge to exchange and share knowledge On the basis of
strengthening existing knowledge and establishing new knowledge links, MOOC training and education activities are carried out by using the dual track interactive mode of online synchronous guidance and offline face-to-face communication. Many colleges and universities in China have also opened MOOC sharing course platform, so that more people can participate in the study of famous teachers’ courses, which will spread the courses more widely and reduce the imbalance of education between regions and universities. Colleges and universities put characteristic and high-quality courses on the MOOC platform for sharing by the alliance colleges and universities, and the credits are mutually recognized, which not only strengthens the inter school communication and exchange, but also saves educational resources [11].

Based on the practice of MOOC at home and abroad, due to the perfect intellectual property protection system, network opening and sharing system and mature financial support system in developed countries, copyright services, course production and data analysis have become the hot spots of MOOC research and practice abroad. Compared with foreign MOOC platforms, domestic MOOC platforms have relatively backward infrastructure, imperfect evaluation system, insignificant personalized learning mode, immature big data mining technology, and weak learning sociality. Therefore, we should draw lessons from the research experience of foreign MOOC practice, formulate MOOC copyright service guide, negotiate and authorize commercial organizations, and advocate open access, some improvements have been made in the collection of course materials, copyright consultation and technical support.

6 Summary
The advent of MOOC has brought a new development concept and model to higher medical education, and also brought an opportunity for the teaching reform of medical information retrieval course. By learning from MOOC to actively promote the teaching reform of college medical information retrieval course, teachers and students can strengthen their sense of autonomy, improve their ability to work and study on the Internet, optimize the teaching process of medical information retrieval, and focus on the interaction and openness of its educational resources. In the teaching of medical information retrieval course, we should promote the construction of information retrieval MOOC and MOOC sharing platform in medical colleges. This will realize the sharing of high-quality curriculum resources of medical information retrieval, narrow the gap of its educational resources between schools, improve its teaching quality, and promote its teaching reform and innovation.

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