New Information and Information Literacy Education in Colleges and Universities under the New Media Environment

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Keywords: Mooc, Micro Lesson, Flip the classroom, Information Literacy Education in Colleges and Universities.

Abstract. The current development of new technology and new media has brought reformational opportunities to higher education, a lot of information literacy education in colleges and universities try to use in a variety of new teaching modes for improving the teaching effect. Through this comparative study of new teaching modes, the writer chooses flipped classroom and teaching reform, which has obtained a remarkable result. Beyond that, information literacy education should be aimed at different teaching objects as well as teaching requirements, then select an appropriate new technology application model, in order to continuously promote the teaching effect.

1 Introduction

The application of information technology in the field of higher education has constantly deepened, which provides a variety of new modes on transmission of knowledge and learning methods for online education. For example, the current new teaching model mainly has Mooc, micro class, flipped classroom and so on. These educational models are fundamentally different from the previous network teaching, not only the innovation of educational technology, more is about the change on educational concepts, educational system, teaching methods and personnel training process. Information Literacy Instruction (ILI) aims to cultivate the information consciousness, information acquisition ability and information ethics of college students, in order to promote their abilities of knowledge renewal, lifelong learning and knowledge re-creation.[1]. Information literacy education as one of the learning skills that college students should master in the information age, compared with the courses that are offered by all the staff of the society, the teaching emphasis and teaching requirements are different. Therefore, we should choose the new teaching mode to promote the improvement of the teaching level. The following content will focus on the author with his own teaching experiences on information literacy and peer learning from each other.

2 The Choice of New Mode of Information Literacy Education

Mooc, micro-class and flipped classroom, each of these three new teaching models has their own teaching advantages and disadvantages, the analysis and comparison of these three teaching models can all provide some references to the reform of the present information literacy education curriculum.

2.1 A Comparison of the Characteristics of the New Curriculum Teaching Mode

MOOCS（Massive Open Online Courses) is a new Internet-based information dissemination model, with free (certificate needs to pay), open, participation, scattered features, it has received an unexpected effect since the date of birth. As a widely used teaching model, its most prominent advantage is that the high quality education resources can be shared around the world, breaking the teachers, classrooms, teaching cycle and any other traditional resources education model. In order to improve the popularization of higher education, it offers favorable and convenient conditions. Secondly, learners can communicate, collaborate, acquire inspiration and learn from their learning partners through a variety of social networking platforms and learning partners from around the world [2]. The disadvantage of the MOOC course is also very obvious: ① The autonomous learning ability of each learner is generally weak, the learning persistence is not too strong, the dropout rate is pretty high. As an example, there was a course at Peking University with 100,000 students, but at the end of the course, around 10,000 students had passed the examination; ② Fewer times to meet in classes and the communication between teachers and students are less interactive, which is not conducive to the overall quality of students training; ③ MOOC did not provide experimental practice teaching conditions, which can not adapt to experimental practice teaching.

"Micro-class", is in accordance with the requirements of curriculum teaching by using video as the main carrier, around a certain knowledge point (key difficult parts) or teaching links, recording the teaching process when teachers taught in the classroom and carried out some wonderful "teaching and learning" activities. On the one hand, "Micro-class" is different from the traditional type of teaching curriculum, teaching courseware, teaching design and other teaching resources, but on the other hand, it is also a kind of new teaching resources that inherited and developed on its basis.

Features: The content of the course is usually a fragment, which is mainly associated with the teaching design, material courseware, teaching reflection, practice test and student feedback, teacher reviews and other auxiliary teaching resources, they are a certain organizational relationship and presentation of common "create" a semi-structured, thematic resource unit applies" small environment ". Its advantages can make the teaching effect more prominent, the shortcomings can only play a supporting role in the teaching process, but it can not completely teach knowledge.

Flip the classroom is a very influential teaching model, which was first proposed by J. W. Baker at the 11th International Conference on University Teaching in 2000 [3]. Refers to the re-adjustment of the time both inside and outside the classroom, transfer the right to make decisions of learning from teachers to students, students from passive learning into active project-based learning, teachers and students study together the process of solving problems, in order to obtain a deeper understanding [4]. Advantages: ① Video short, refined, produced on specific problems; ② Consider learning tasks as the main line, students can do self-learning through videos before classes, have interaction with teachers, solve difficult problems and absorb the effect of internalization of knowledge; ③ Through the review of the test link, it can help consolidate the knowledge. Flipped classroom has a certain mandatory learning requirements for students. Due to the existence of face teaching, there will be some control on the teaching quality. Meanwhile, it can support the experimental practice teaching.

2.2 The Choice of New Mode of Information Literacy Education

Overall, the current MOOC platform mainly operates by video communication, consider

teaching knowledge to the network as the main method, but the teaching mode is relatively simple, teaching design is relatively simple, somehow it is difficult to adapt to the practical university information literacy education.MOOC and flip classroom both apply the micro class form of recording videos, micro-class can come up with purposeful solution to the problem for certain topics or projects, which is a good auxiliary teaching method. However, flipped classroom can achieve whether online or offline integrated teaching mode, it's offline teaching has a good interaction, teaching control and teaching feeling by face to face, which is really hard for MOOC teaching model to achieve. Chinese famous educational technology expert Mr. Nan Guo Nong summed up the development of China's education information in the new stage, the mixed learning theory as China's education information in-depth development stage of the dominant theory, the basic view is "the advantages of traditional learning methods and digital learning the advantages of the combination, so that the two advantages complement each other in order to obtain the best learning effect "[5].Therefore, the author used the flipped classroom teaching model for teaching design and reform.

3 Teaching Design of Information Literacy Education

The author's school information literacy education teaching course is set to 16 hours, the course category as a general compulsory course for the freshman fresh school, 1.5 credits. Limited school hours, the need to refine the content of each lesson.The author by turning the classroom mode, to strengthen the students line self-study, improve the strength of practical practice, thereby enhancing the efficiency and effectiveness of online teaching.

3.1 Offline teaching design

According to the actual situation of the students, the design of teaching content is divided into eight modules, each module teaching 2 hours, the design of two videos, each video in about 15 minutes. Video teaching content, selected concise, keep short and pith but can highlight the teaching focus, difficult, so that students can learn self-learning, master the essentials. In order to consolidate and improve the self-study effect, Research and development examination system, construction question bank, question bank design and video teaching content and teaching materials are closely linked, the title is divided into single election, multiple choice, judgment. After the video study, students need to log in the examination system test questions, the system automatically marking, test scores included in the usual results, usually accounted for 30% of the total score. This assessment method to a certain extent, to stimulate the learning initiative is not strong students, but also to avoid the flip classroom teaching students offline learning perfunctory, online teachers and students difficult to embarrass the situation. Comprehensive test for the course examinations, the use of curriculum construction of all the exam, the results accounted for 40% of the total score.

3.2 Online teaching design

Classroom dialogue and discussion, the need for teachers to make careful preparation and meticulous observation, and truly teach each other. "Turn the classroom" is successful, because the classroom discussion brought about by the students "absorb internalization" learning process to enhance the efficiency. Therefore, the online teaching of the author combined with the students self-test results, for students difficult questions, take the students to ask themselves and teachers guide the combination of methods, the traditional teacher monologue to pass information model into students to analyze and absorb information, the teaching model to improve students' interest in learning. In this course teaching module, in addition to the basic theory of learning, the most

prominent is the retrieval of each search tool to master and use, so the author deliberately designed to guide the content of the classroom focus on the search skills to master learning, highlighting the focus of teaching and difficulty.

It is more important to flip the classroom how to spend time in the classroom. This course all in the room class, the author will save the time mainly for experimental teaching and practice, will still be more time to give students. The author designed the course experimental instruction book, including the experimental purpose, the experimental content and the request, the student must complete each lesson instruction in the subject matter. In the experimental teaching, the author implemented the team experiment teaching. That is based on the idea of teamwork, guided use of the form of the group, so that students can unite and collaborate, pay full attention to their own and mutual education between the same boat. Teamwork teaching is based on the student as the main body, teacher guidance, the students of individual learning into cooperative learning, to promote students to help each other to strong and weak, so that different levels and types of students to improve the overall operational skills. At the end of the experiment, the students test the test, the test scores are also included in the total score, accounting for 30% of the total score. Teamwork teaching is based on the student as the main body, teacher guidance, the students of individual learning into cooperative learning, to promote students to help each other to strong and weak, so that different levels and types of students to improve the overall operational skills. At the end of the experiment, the students test the test, the test scores are also included in the total score, accounting for 30% of the total score.

Practice has proved that flip the classroom teaching model, effectively improve the students learning initiative, can save more time for training students operating skills, so that students have increased the practical experience, deepened the understanding of knowledge and master , active classroom teaching, teaching information is large, is conducive to students get more knowledge, broaden the knowledge, improve teaching quality. In recent years, the author of the class with a significant increase in pass rate, students feel the lessons of the course is benefited, that this course for their future study, life-long education provides a very good help.

4 Conclusion

The impact of information technology on the field of education is expanding, the curriculum teaching model has also been innovated and diversified to various ways of learning online, which creates a new open educational ecology. But each teaching model of the proposed represent a different perspective, different educational assumption and educational philosophy, we should be an objective attitude, for different courses, for the objects and requirements of teaching, rational thinking and application, but should not blindly follow, contrary to the law of education and teaching, because the effect of teaching may be counterproductive.

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