

Research on Art Flip Classroom Teaching Mode under the Background of Big Data

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Abstract: Big data technology provides a large amount of teaching resources for college teaching, and the use of flipping classroom teaching mode can effectively improve teaching quality. In the context of big data, college art professional application flipping classrooms, while promoting professional teaching innovation, also faces certain development challenges. Based on this, this paper analyzes the advantages of the flip classroom teaching mode in the era of big data, and then points out the challenges faced by the art flip classroom teaching mode from two aspects, and finally proposes the optimization strategy of the art flip classroom teaching mode.

1. Research Background

1.1 Literature review

In recent years, domestic scholars have gradually increased the research on the application of big data technology in college flipping classroom teaching, and have now formed a certain scale of literature. Zhou Dan and Chen Liting in order to achieve personalized education, improve teaching effects, analyze the learning characteristics of the era of big data, and combine the flip classroom to propose a new teaching model based on flipping classroom combined with Internet education and traditional education (Zhou and Chen, 2015). On the basis of analyzing big data and flipping classrooms, He Jian puts forward the network technology curriculum teaching model based on flipping classroom based on the characteristics of network technology courses. Through the three stages of detailed design model, the teaching model can enhance students' self-learning ability, practical ability and innovative ability, and improve classroom teaching effect (He, 2016). Through research, Dina found that the "Business Translation" flipping classroom teaching mode can integrate MOOC teaching methods and traditional business translation teaching content to realize personalized learning and independent learning, and effectively improve teaching effects (Zhai, 2017). Yang Luhong mainly discussed the advantages, importance and feasibility of "flip classroom" in the context of big data, and analyzed the model applied to the teaching of college literature (Yang, 2017). Zhao Juan believes that if we want to realize self-learning and improve the quality of business English translation, we should use big data technology to summarize teaching experience, and combine the new teaching methods such as flipping classrooms to innovate the university English translation teaching mode (Zhao, 2018). Taking the teaching of network technology courses as an example, Qi Jiayi explores the flipping classroom teaching mode under the background of big data, and analyzes the teaching mode from the aspects of teaching resource development, classroom teaching implementation and teaching evaluation (Kuang, 2019).

1.2 Purposes of research

The main place for the country to cultivate high-skilled talents is higher education institutions. In recent years, with the increase in the demand for high-quality talents by social enterprises, higher education has attracted the attention of all sectors of society. In order to cultivate more talents suitable for the needs of social development, colleges and universities have carried out teaching reforms of various types, and constantly innovate teaching models and methods. Under this background, the flipping classroom teaching mode based on class study and class communication discussion is proposed, and gradually applied to the teaching practice of major universities.

Therefore, the teaching model has achieved good teaching results and has received wide attention from all walks of life (Liu, 2015). Art class, as the basic course of art education, has an irreplaceable position in art education. In recent years, improving the quality of art education and accomplishing the goal of cultivating people who meet the needs of social development has become an important issue facing the development of art education. In the context of big data, using the flip classroom teaching model can help art teachers to transform traditional teaching methods and reform educational ideas. Therefore, this paper deeply analyzes the development of the art flipping classroom teaching mode, in order to promote the quality of art professional teaching.

2. Flipping classroom teaching mode in the era of big data

The flipping classroom is a new teaching mode generated under the background of information technology development. It refers to the teaching method in which the teacher records the teaching video and the students watch the video to learn. Under this teaching mode, students mainly study independently under the class, discuss and solve problems in class, and the student's learning process is reshaped to realize the innovation of education (Tang et al, 2019). Specifically, there are four main advantages of flipping the classroom teaching model, as shown in Table 1.

Table 1. Main Features of the Flip Classroom Teaching Mode

Advantage	perform
The textbooks are short and concise, with diverse styles	Teaching videos, PPT, etc., vivid and diverse, rich and interesting
Reshape the learning process	Knowledge acquisition is in the first place, teachers provide online guidance for students; knowledge is consolidated in the class, teachers mainly explain the questions raised by students, and guide individual students to help students learn key knowledge effectively
Improve students' self-learning efficiency and self-evaluation quality	Give students sufficient self-learning space to achieve targeted and purposeful self-evaluation; students can ask teachers and other students through online channels

In the current era of big data, Chinese colleges and universities flipped classroom teaching and ushered in new development opportunities. First of all, teaching resources are more diverse. With the help of big data technology, teachers can base on the basic teaching content, search and explore massive extracurricular multimedia courseware on the Internet, and not enrich and expand teaching materials. At the same time, teachers can organize these materials into teaching aids such as video, audio or text to meet the higher demand for learning content. By learning these rich teaching materials, students can get interesting experiences on the basis of harvesting knowledge, which is conducive to establishing divergent thinking and mobilizing learning enthusiasm.

Second, shared resources are more extensive. In the era of big data, massive amounts of information data have been transmitted more conveniently and quickly through the Internet. Whether it's data output or acquisition, it's easy. When students are learning the content of the course, in addition to content learning through video, they can also use the big data technology to access the vast amount of learning materials related to the course. When faced with problems and confusion, students can also use big data technology to find solutions. Teachers can use the big data technology to remotely solve and interact with students' problems to ensure that teaching tasks are completed efficiently and with high quality.

Finally, the teaching assessment reflects real-time. In a big data system, any target object has a lot of potential information, which can convey the development status and trend of things. It can be said that big data can help analyze the development of things and find common rules. With the help of big data technology, students will watch the footprints of teaching videos on the teaching network platform, and will be recorded and updated in time to form real-time online data in different formats. Therefore, teachers can analyze and process these data in a timely manner, grasp the real information of students' learning in a timely manner, and provide feedback on the problems

encountered by students. According to the relevant data obtained by the teaching network platform, the teaching quality and teaching effect are evaluated in real time.

3. The challenge of art flipping classroom teaching mode under the background of big data

With the development of social economy and the improvement of material living standards, people's pursuit of good things is more intense. Under this background, the development of college art majors has gradually entered a new stage. At present, the focus of college art majors is on the training of senior professionals, including teaching and research, art criticism and editing, art management and museums. Therefore, all major colleges and universities will promote the all-round development of students as a core goal of teaching. Moreover, under the impetus of big data technology, college art flip classroom teaching mode was proposed. With the help of WeChat, QQ, blog and other online learning platforms, as well as mobile, computer, tablet and other learning tools, students can access a large number of art teaching resources from the Internet, which can enrich the students' learning content and effectively promote the quality of art teaching. But at the same time, the art flip classroom teaching model also has certain development challenges.

3.1 Fragmentation of teaching knowledge content

The art majors include art history, art education, painting, and art relics. The content of the design is more extensive. The flipping classroom teaching mode can provide students with a variety of art dynamic graphics and videos, leaving students with an intuitive and profound impression. However, most of these teaching videos are short in duration, and the moving pictures are scattered, dividing the teaching content into various small modules. In this mode, the learning of extracurricular knowledge points becomes difficult to control. And in the context of big data, the fragmentation and decentralization of teaching knowledge content is more serious. This has increased the difficulty of finding students' data to a certain extent. Moreover, it is not conducive to the unified supervision of art teaching by teachers or schools.

3.2 The quality of professional learning resources is wide

The Internet has realized the online communication and transmission of various types of data and information. Big data technology has established a huge database for massive data. The combination of the two provides great convenience for the teaching of art majors in colleges and universities. At the same time, however, the tedious teaching materials in the massive database, including the video, audio and graphics uploaded by different content providers, make the quality of the art professional learning resources wide. In the vast amount of learning resources, it is difficult for students to quickly and accurately select the learning materials that suit them. This will result in wasted time and energy, thus reducing learning efficiency and quality.

4. Optimization Strategy of Art Flipping Classroom Teaching Mode under the Background of Big Data

4.1 Strengthen the integration of teaching resources and enrich the types of teaching resources

In order to improve the learning effect of art students, teachers need to provide students with more rich teaching resources. Specifically, teachers should use big data technology to strengthen the integration of various teaching resources and continuously enrich the types and content of art teaching resources. In preparing the courseware, in addition to preparing the course content, the teacher should also prepare some cultural knowledge of artists and paintings to enhance students' interest in learning. For example, Da Vinci, Van Gogh, Picasso, Qi Baishi, Wu Guanzhong, Xu Beihong, Zhang Daqian and other life stories can be displayed to students in a variety of teaching resources such as film, video, pictures, and text. Through the story of artists creating art works, students can experience the quality of good observation and multi-angle thinking, and enhance the comprehensive quality of students' art while increasing the interest of teaching content.

4.2 Strengthen information supervision and management, and improve the quality of teaching resources

In the context of the era of big data, the release and acquisition of art teaching information has become very convenient. In order to effectively find high-quality art teaching resources in massive Internet information, relevant departments need to supervise and manage network information data. Specifically, relevant departments should formulate normative anti-standards for online teaching information, and track, delete or remove unhealthy, incorrect, and unreasonable teaching resources on the Internet, and retain high-quality and useful teaching resources. At the same time, when using the online teaching video, the art teacher needs to know and check the related video in advance, pay attention to whether the video content is consistent with the student's learning stage, and pay attention to whether the video content matches the teaching content. In addition, art teachers should teach students to identify online teaching videos and resist unhealthy teaching information, thereby improving the quality of teaching resources.

4.3 Combine flipping classroom with traditional teaching mode to improve teaching quality

Art is a highly practical profession. In the teaching, you should not use online video teaching excessively, or pay attention to the control of classroom teaching content. Therefore, in the context of the era of big data, college art majors should combine flipping classrooms with traditional teaching models to improve teaching quality. Specifically, the flipping classroom should be used as an auxiliary means of the traditional teaching mode. For the specific content of the art major, such as the creation process of a certain work, the video teaching of the flipping classroom can be used. For Abstract.content, it should be taught, explained and analyzed by the teacher in the classroom. Therefore, art teachers should grasp the combination of flipping classroom and traditional classroom teaching, and comprehensively improve the teaching quality of art majors.

4.4 Effective use of assessment feedback data to provide guidance to students

In the era of big data, students' professional course learning, including course video views, number of replays, questions, general situations, etc., will leave a mark on the Internet. Using the data analysis technology of big data, the teacher can quickly and accurately extract the required data information, and realize the "visualization" control of the students' learning situation. Therefore, art teachers should effectively use the evaluation and feedback function of big data to timely follow up the students' learning on the online platform, and provide professional guidance for students according to the comprehensive evaluation results.

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