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Exploration and Practice of Teaching Mode of Motor Design Course Based on Online and Offline Mixed Mode

Hongxia Yu

Shenyang Institute of Technology, Fushun 113122, China

Abstract: The course of motor design is highly theoretical, and its basic principle is based on the relatively abstract theory of electromagnetic induction, which is a comprehensive subject. Because electromagnetic theory is very abstract and the analysis is complex, students generally think that this subject is difficult to learn and lacks enthusiasm for learning. Through the construction of online and offline resources of this course, the learning effect of students can be greatly promoted, the self-learning ability of students can be enhanced, the learning interest of students can be improved, and the professional ability can be increased.

Keywords: Motor Design, Online And Offline, Professional Ability.

1. Introduction

Motor design course is a course with obvious specialty, abstract concept and relatively extensive theoretical knowledge. Social enterprises have a great demand for professional and technical personnel of motor. In order to better train professional personnel of motor, the motor design course has been deeply reformed. The teaching mode of this course has always been based on theoretical teaching, but the understanding of manufacturing knowledge is only taught in theoretical way, which is difficult for students to understand and master. To learn this course, students need to preview in advance and have a preliminary understanding of the knowledge points. Only through the teacher's explanation in class can they better grasp it. Only after class review and exercises can we master this knowledge well.

Because this course is highly specialized and there are no relevant course videos and course information resources on the network, it is difficult for students to obtain the network information resources of this course, which brings great difficulties to students' self-study and preview. The construction of online resources of this course can greatly promote students' pre class preview, improve the preview effect of students and enhance their self-learning ability. Then, through the explanation of the teachers and classroom discussion, students' learning interests can be greatly improved and their professional abilities can be increased.

Integrating the "online and offline" mode into the motor design course of electrical engineering and automation specialty, so that students can carry out teaching in the teaching mode of offline teacher's explanation, online resource preview and review, online resource practice and test practice, which is of great significance to the improvement of their teaching mode.

2. Contents and objectives of teaching improvement

2.1. Improvement content

Enrich the content of the course and broaden the use of the course. The online and offline hybrid

teaching mode involves relevant students at different levels of the electrical major. Therefore, the applicability of the course should be enhanced, and the course can play a greater role. The theoretical teaching module of the course is complete, and the teaching video is detailed and clear, which can adapt to different levels of students.

Improve the online teaching knowledge points and move towards the direction of conciseness

and accuracy. This course needs to make use of the school's offline teacher resources and online new media resources to jointly help this course. Due to the particularity of online teaching, its teaching video is not easy to be too large. The video content needs to be concise and accurate, so that students can learn useful knowledge in the most efficient attention time.

Increase the content of practical teaching and pay attention to the cultivation of students' ability.

Practical teaching is an indispensable teaching link in the cultivation of students' ability. Therefore, within the existing online and offline class hours, online resources are used to increase the content of practical teaching, such as video recording and practice case analysis, so that students can truly realize the "integration of theory and practice" teaching by using the online and offline "mixed" teaching mode. In addition, online assessment and test process can be added to further consolidate theoretical knowledge.

2.2. Reform objectives

1. Explore the teaching mode of "online and offline" motor design course, improve students' enthusiasm and initiative through online and offline resources, and improve students' knowledge and ability;

2. Study the teaching design of "online and offline" teaching mode, refine teaching, record videos of various knowledge points, collect videos of motor structure and technology, and design review topics to improve the online teaching content. The offline teaching content is completed through the offline course explanation and the hands-on operation of the experimental class.

3. Explore teachers' information literacy that is compatible with online and offline teaching methods, and seek ways and means to improve teachers' information literacy and professional growth.

3. Methods of Teaching Reform Theory Teaching

3.1. The Reform Program

Based on the investigation of the teachers and students of the major, and according to the current situation of the electrical engineering major of the University, the exploration and practice of the teaching mode of the motor design course based on the online and offline mixed mode are carried out. The reform plan needs to realize a new teaching mode of online and offline mixed mode courses with offline teachers teaching and online resources guidance by using advanced new media technology.

1. Curriculum system reform

According to the exploration of the teaching mode of online and offline mixed mode, the tasks of

the course will be broken down, the specific implementation stages will be refined, the teaching syllabus, teaching content, teaching calendar, assessment methods and other contents will be refined, and the course tracking will be achieved.

Offline teaching teachers can combine the new media platform to realize the pre class preview arrangement of typical knowledge points, use the mode of "flipped classroom" to realize the mastery and understanding of existing knowledge, improve students' self-learning ability and communication ability, and realize the transformation of teaching subject through the teaching mode of "flipped classroom", so that students can truly become the "master" of the classroom.

2. Promotion of teaching staff

In order to achieve the expected effect of the subject teaching, the teacher team needs to conduct in-depth control and Research on the subject and curriculum, and also promote the teacher team to deepen the curriculum teaching reform and improve their self-ability, and promote the improvement of teaching level and teaching effect.

3.2. Research Method

1. In terms of research methods, it is necessary to analyze and summarize the knowledge, ability

and quality required by the course through investigation and Study on various aspects and consulting literature.

2. By combining the actual needs of the research, integrating the content of relevant courses, organizing and improving the teaching sequence and mutual connection of each course.

3. Through research and analysis, and according to the course content, the online resources are designed and small videos are produced.

4. The teaching team carries out joint discussion and communication, realizes the detailed arrangement of the course contents, teaching syllabus, teaching design, assessment methods, etc., and maintains close contact during the teaching process. According to the situation of students, the teaching team timely modifies all links in the teaching, and finally achieves good teaching effect.

4. Summary

The teaching method of the motor design course, which takes the online and offline mixed mode teaching mode as the main means, is scientific and progressiveness. The online and offline mixed mode teaching mode has changed the situation in which students were passively accepted by a teacher in the past, and has explored and cultivated students' comprehensive quality and ability.

Using new technologies and resources to carry out the new mode of students' independent learning, cooperative learning and inquiry learning, cultivate students' comprehensive ability, and at the same time, using modern teaching theory as guidance, improve teachers' information literacy, so as to enable teachers and students to grow together, create an efficient classroom and improve teaching quality.

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