

Research and Practice on the Teaching Mode of Power Plant Electrical Part Based on Superstar Platform and Physical Classroom

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Abstract: In order to improve the classroom teaching effect, in recent years, the teaching methods of discussion, heuristic and task driven are applied to the classroom teaching of the electrical part of power plants according to the different contents of the chapters. In the case of serious shortage of class hours, the lack of traditional teaching mode can stimulate students' initiative in learning, and the teaching effect is not satisfactory. A set of feedback interactive hybrid teaching mode suitable for the course of "Electrical Part of Power Plant" is constructed based on the superstar learning platform. This teaching mode optimizes the classroom teaching system, solves the problem of students sleeping in class, improves the teaching quality and cultivates students' comprehensive quality.

The electrical part of power plant is one of the important professional courses of electrical engineering. The development of this course needs to be based on the mastery of basic electrical engineering courses. At the same time, this course has the characteristics of strong professionalism, requiring on-site experience, and many formulas that are difficult to understand. Starting from the teaching mode, this paper discusses the development status, advantages and disadvantages of traditional teaching and flipped classroom teaching. Based on the characteristics of the flipped classroom, based on the students as the main body, combined with the superstar learning platform to build a set of feedback interactive hybrid teaching mode suitable for the use of the curriculum. This teaching mode optimizes the classroom teaching system, solves the problem of students sleeping in class, improves the teaching quality and cultivates students' comprehensive quality. The proposed teaching method can promote the teaching quality of the electrical part of power plants, and provide important reference suggestions and support for the improvement of teaching methods.

1. Status Analysis

In the process of teaching implementation, the practice and experimental teaching links of the main professional courses of "Power Plant Electrical Part" are difficult to teach, costly and difficult to ensure the teaching effect because of the high risk and irregularity of on-site practical teaching in thermal power plants. Although it is necessary to organize undergraduate students to enter the real

thermal power plant for cognitive practice every year according to the requirements of the syllabus, because the power plant undertakes the power generation task and the units are in working condition, students cannot effectively understand the three main engines and corresponding electrical equipment of the power plant. In addition, due to the limitations of objective factors such as short cognitive time, students do not know enough about the operation process and electrical control of the power plant[1]. In the traditional teaching mode, teachers generally occupy the leading position in teaching, and their advantages are relatively clear, that is, teachers can easily manage the teaching process. One of the core goals of undergraduate education in China is to cultivate innovative and specialized talents for socialist construction. However, the traditional teaching model, because of the inherent subordination between students and teachers in its teaching mode, is often unable to cultivate students' interest in learning and stimulate students' innovation ability. At the same time, the talents cultivated under the traditional teaching mode are generally theory oriented, and the talents cultivated are poor in practice and practical application[2].

2. Proposed Reform measures for the Above Problems

(1) Optimize resources and integrate multi interdisciplinary theories

For the knowledge points of different courses that are related to each other, integrating them in the teaching process can help students learn and master such knowledge points. Actively explore the student centered teaching mode, let students consult materials after class as much as possible, participate in classroom discussions, and regard knowledge teaching as a two-way interaction between "teaching" and "learning". Teachers should play a more important role as tutors and give full play to their role in guiding, helping and encouraging students' autonomous learning. Through actual engineering problems as the starting point, guide students to solve engineering problems as the goal, and complete the process of students' active knowledge seeking, independent choice and self deepening.

(2) Optimizing teaching means and reforming traditional teaching mode

Chaoxing Fanya Learning Platform is a teaching platform developed by Beijing Chaoxing Company, which aims to enable teachers and students to realize real-time multimedia teaching through the network. It is rich in teaching models, which can realize teachers' all-round teaching in daily preview, class, sign in, teaching, communication and interaction, and consolidation after class. Teachers use APP Learning Connect to deepen communication with students and maximize the distance between teachers and students[3]. On Learning Pass, students can learn online, do homework, discuss courses, discuss in groups, take notes, take exams and query scores anytime and anywhere, which is simple and easy.

The teaching process makes full use of the existing teaching resources of the school, completes the teaching process through video display, classroom interaction, problem discussion and other ways, improves the classroom teaching methods, improves the online learning platform, and guides students to learn and consolidate professional knowledge on multiple platforms and channels.

(3) Pay attention to details and improve teaching effect

The teaching implementation link is mainly realized through three aspects: first, in the pre class preview stage, students have different learning abilities. In this stage, students mainly use the online learning method. Students can watch famous teachers' teaching videos on the online learning platform, use search engines to query various knowledge points, use social software to discuss problems with curriculum researchers who are far away from the space. Second, in the classroom teaching stage, the role of the classroom is not only to realize the teachers' speaking and students' listening, but also to realize various exchanges and discussions, so that students can understand problems more deeply, and can also use various network resources[4]. The third is the consolidation

stage after class. Through classroom learning and discussion, students have further deepened their understanding of knowledge points. At this time, they must reflect and summarize in time. They can learn the course through online test questions and other ways.

(4) Build evaluation system - integrate ideological and political elements

To evaluate the students' performance with comprehensive ability, realize the transformation from traditional exam oriented education to quality education, incorporate the assessment content reflecting the ideological and political elements into the process evaluation and final evaluation of the curriculum, explore the integration path of professional basic practice courses and ideological and political education, so as to cultivate the craftsmanship spirit of keeping improving and pursuing perfection, and improve the students' professional quality.

3. Theoretical Content - Introduction of online and Offline Hybrid

Multimedia is a teaching method that accompanies the times. By showing different dimensions of knowledge in the classroom, it greatly broadens the knowledge that students face. Students and teachers communicate with each other, dig out problems, propose targeted solutions to a specific problem, and provide practical personalized guidance to students.

(1) Share the screen and focus everyone. After the teacher invites the students to enter the Learning Pass, the teacher first opens the screen, shares the teaching content, focuses the attention of the students, and gives lessons.

(2) Resource sharing and independent display. From various aspects of resources, teachers can sort out and integrate the contents of chapters and sections, key teaching points, and early concepts into a map before teaching students, which can be specifically used in mind mapping or PPT process. Or show some photos or pictures related to teaching to everyone. The competent teachers can also organize some students to shoot and share micro videos[5]. In a word, they can show all things related to teaching to students during the course of teaching, reflecting the diversity of resources and the convenience and efficiency of sharing.

(3) Learn independently and improve each other. In the actual teaching process, teachers share the screen content, and students follow the teacher's thinking, and use the teacher's questions to make students and teachers think about each other, so as to exchange feedback, and let knowledge content flow between teachers and students, so as to achieve common learning. The specific communication can be the mutual answer of questions. Use the diversity of resources to switch, from words to pictures to videos, to fully mobilize the enthusiasm of students, integrate and include students' thoughts, emotions and ideas, and achieve in-depth teaching explanation.

(4) Pay attention to feedback and correct immediately. Teachers should consciously broaden and deepen their questions and students' answers every time, gradually introduce students into the focus of the teaching content, and modify the teaching plan according to the feedback, follow up and correct it in real time.

In the process of teaching reform, the easy to use Superstar Fanya learning platform is used to enable teachers and students to realize real-time multimedia teaching through the network. It is rich in teaching models, which can realize teachers' all-round teaching in daily preview, class, sign in, teaching, communication and interaction, and consolidation after class. Teachers use APP Learning Connect to deepen communication with students and maximize the distance between teachers and students. On Learning Pass, students can learn online, do homework, discuss courses, discuss in groups, take notes, take exams and query scores anytime and anywhere, which is simple and easy. In this process, the teacher can also assist students to understand and understand the actual structure of the abstract electrical equipment in the course to be taught, realizing students' perceptual understanding of the course and helping students understand the environment and form of enterprise

employment in electrical engineering in advance.

4. Implementation Plan

(1) Construction of teaching echelon: build a planned team of teachers for curriculum implementation with rigorous scholarship, strong sense of responsibility, good spirit of unity and cooperation, reasonable knowledge structure, professional title structure and age structure, and a wide range of majors.

(2) Textbook construction: revise teaching plans, assessment methods, electronic teaching plans and other teaching documents to make the teaching content scientific and complete.

(3) Teaching methods, means, etc.: For students, use the online and offline hybrid teaching mode of Superstar platform to enable teachers and students to achieve real-time multimedia teaching through the network. It is rich in teaching models, which can realize teachers' all-round teaching in daily preview, class, sign in, teaching, communication and interaction, and consolidation after class.

(4) Practice teaching link: teachers can use APP Learning Link to deepen communication with students, which can provide self feedback and maximize the distance between teachers and students. On Learning Pass, students can learn online, do homework, discuss courses, discuss in groups, take notes, take exams and query scores anytime and anywhere, which is simple and easy.

(5) Build assessment system: guide students' creative thinking according to project requirements. The supporting assessment mechanism has also changed. In the past, basic concepts and calculations were mainly assessed, and most of the results were based on the final examination. The current assessment focuses more on the students' scores of independent design and defense in the smart classroom, and the proportion of final exam scores is greatly reduced. This kind of teaching method avoids the examination mode in which a final examination paper determines the score, and focuses on the ability cultivation of students to solve complex engineering problems by using the knowledge they have learned and obtained through other ways.

5. Conclusion

The exploration and practice of this online and offline interactive feedback hybrid teaching mode supported by Superstar Learning Link put forward the teaching process including pre class, in class and after class. The mixed teaching mode has realized the close contact between teachers and students, communication and interaction, and timely feedback in the teaching process, greatly enhanced the students' participation in teaching, activated the classroom atmosphere, solved the current problems of students playing mobile phones in class, "sleeping in class", and inattention, corrected the students' distraction, improved the bachelor's attention ability, innovation ability, language expression ability, etc., and also helped to improve the classroom teaching effect. After two years of teaching, with the close cooperation of teachers and students, this kind of hybrid online teaching has achieved a good teaching effect, with a satisfaction of 93.05%. It has won unanimous praise from students in the school's teaching evaluation survey.

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