

Discussion on the Course Teaching Mode based on OBE Education Concept

--Take "Java Web Technology" Course as an Example

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Abstract

With the development of society, the standard of talent measurement and the demand for talent are constantly improving. Colleges and universities as the main position of training high-end talents, in order to meet the needs of social development and provide more high-quality talents for the society, are actively carrying out teaching reform to comprehensively improve the quality of teaching. OBE teaching idea is born in such a background, and the hybrid teaching mode based on OBE teaching idea has aroused widespread concern in the field of education and teaching. This paper will take "Java Web technology" course as an example, analyze and discuss the teaching mode and innovation strategy of OBE teaching concept, in order to improve the teaching level of the course.

Keywords

Java Web Technology; Teaching Mode; Innovation Strategy.

1. Introduction

OBE education idea is the education mode based on learning output. However, the current situation of engineering talents training in most colleges and universities in China is that the goal orientation is not clear, engineering teaching is theoretical, and the understanding of general and engineering education, practice and experimental teaching is not clear enough, which leads to the poor engineering practice ability and low comprehensive quality of the graduates, It can not meet the actual needs of industry enterprises. Therefore, how to re-establish the training objectives, update the professional curriculum system, promote the construction of collaborative education mechanism and professional practice platform, and cultivate compound new engineering talents with innovative and entrepreneurial spirit and ability. OBE education concept requires to determine the output of education, namely "achievement", that is to clarify the goal of students' training, namely "what kind of people to cultivate". With the deepening of the application of computer, Java Web technology as an important category of computer applications, the degree of attention is gradually increasing. More and more enterprises and organizations need to build websites, and more and more websites need to be managed and maintained. For Java Web technology, we need to determine the talent training objectives according to the development of social information technology, the development of the industry, the positioning of the school, and so on, so as to cultivate new engineering compound talents with scientific and innovative thinking, wide range of knowledge, strong engineering practice ability, and lifelong learning ability.

Students passively receive knowledge in the process of learning, and they can not get good thinking and application. They often have fragment memory. When they learn some knowledge fragments in class, they forget after class, and they can not connect with the new knowledge

points in the next class, which may seem to have learned a lot of knowledge. However, when they finish comprehensive homework, they can not start, and they are not able to move hard, lack of creativity and flexibility, It can not use the knowledge learned to solve the practical problems well, and it has not played a good role in the future social development. In the teaching process, we should update the teaching concept, adopt various interesting teaching methods, expand the teaching content, combine the teaching materials to excavate, stimulate the interest of students, improve the quality of classroom teaching, and strengthen the students' innovation consciousness in the course learning of JavaWeb technology^[1].

2. Analysis of the current situation and characteristics of College Students

The students in Colleges and universities are lively and active, curious about new things, energetic, competitive and self-expression. At the same time, the students also lack of learning continuity and autonomy, lack of self-discipline, no interest in the classroom, do not want to start and so on, which leads to the relatively unsatisfactory teaching effect. Students hold a wait-and-see attitude towards professional learning. Teachers listen to as much knowledge as they teach. They seldom take the initiative to absorb it, let alone review, expand and draw inferences from one instance after class. Few students take the initiative to learn, but they are at a loss because of their weak basic knowledge. There are very few students who can really clarify their goals and find a way to study seriously. Of course, the characteristics of college students determine the learning characteristics and particularity of college students.

According to Professor Gardner's theory of multiple intelligences, the intelligence tendency of the vast majority of students entering colleges and universities is mainly image thinking, which is suitable for the teaching mode of learning by doing. Teachers need to fully explore the students' interest in teaching, make the teaching content into it, build a happy and efficient classroom, so that students can complete the course learning in a relaxed and happy atmosphere, and play a sense of innovation^[2].

3. Problems encountered in the course of JavaWeb Technology Course Teaching

First, the teaching idea is relatively old. Java Web technology course is a course that arises at the historic moment under the background of information age. Java Web technology needs more professional talents, and the industry also puts forward higher and higher requirements for staff. But in the current teaching process of Java Web technology course, the teaching idea is still relatively old, and the conventional mode is used for Java Web technology course education. In order to impart the knowledge of Java Web technology, we don't think much about the main position of students, and we don't reform the Java Web technology curriculum education combined with the concept of quality education.

Second, the teaching content is relatively single. In the teaching process of Java Web technology course, the traditional teaching concept determines that the teaching content is relatively single. For example, many Java Web technology courses are repeated teaching of some basic teaching content, teachers guide, students memorize all kinds of knowledge, and then complete all kinds of examinations, and do not get the real opportunity to practice, Therefore, students' understanding of Java Web technology is not high enough^[3].

Third, the teaching method is relatively old. In the traditional teaching process, teachers only use the traditional way of knowledge explanation, which makes it difficult for students to have a strong interest in learning java web technology course. German educationist barstowe once said: "the art of teaching is not to impart skills (knowledge), but to inspire, awaken and inspire students to learn." In the era of quality education, teaching methods must be expanded, such as

with the help of multimedia teaching, changing teaching methods, in order to improve the teaching level of Java Web technology course.

4. Analysis and innovation strategy of JavaWeb technology course teaching strategy

4.1. Write the experimental training guide book based on OBE education concept, carry out project driven teaching, and enhance students' programming practical ability

According to the professional training objectives of Computer College in application-oriented universities, students' programming practical ability is a professional quality and ability of students. For students majoring in computer science, students should be required to master the method of systematic computer programming in teaching. Project teaching method can be adopted. Through the teaching arrangement of setting projects, teachers can better grasp the understanding of knowledge and the law of thinking, gradually deduce and analyze practical problems, find out the inherent law, and enlighten teaching when explaining. In the process of training students' interest in programming, through some small games that can make students interested as teaching cases, guide students to analyze and solve problems, fully mobilize students' enthusiasm in programming learning, gradually let students have interest in the learning process, solve practical problems through the theoretical knowledge, let students adapt to the project to complete the problem, Exercise students' ability to analyze and solve problems independently.

4.2. Develop teaching resources based on OBE education concept, including teaching plans, courseware, MOOCs, etc, make full use of modern educational technology, enrich teaching means and teaching methods

The online and offline hybrid teaching mode is adopted to create a closed loop of learning, which can greatly improve the learning efficiency and interest. To explore the construction of online open courses for practical courses of applied undergraduate software engineering, to maintain the characteristic teaching mode of "employment oriented and ability oriented" of applied undergraduate, and to actively explore various forms of online open courses applicable to the training of software engineering professionals in combination with the social demand for software talents and the future development direction, The online curriculum content is updated based on the demand of industrial development and the latest development of disciplines and technologies. The paper integrates various kinds of high-quality teaching resources by means of information technology, creates an online and offline teaching mode of "online learning evaluation + offline answering and solving puzzles", promotes the integration of various online open courses and promotes the innovation of teaching mode^[4].

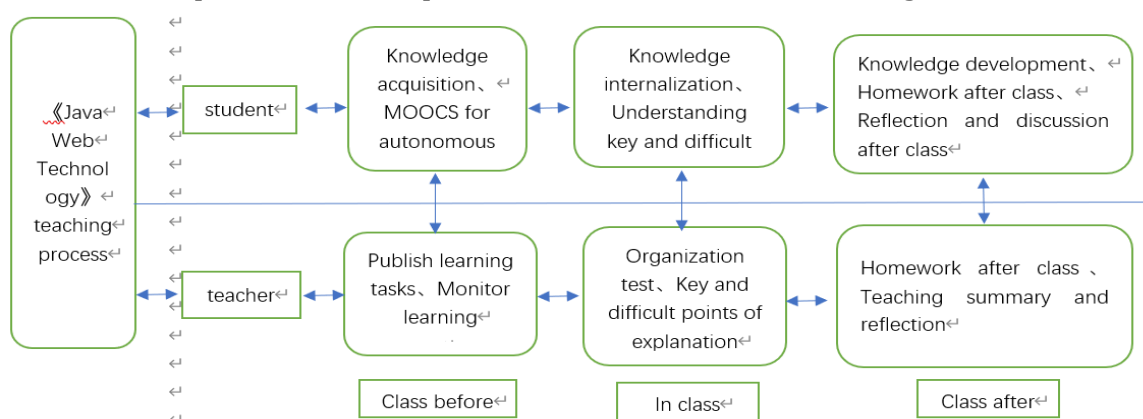


Figure 1. Hybrid teaching process of Java Web technology based on OBE education concept

4.3. Reform the form of assessment, pay attention to the process of curriculum evaluation, fully affirm the growth of students

According to the characteristics of software engineering professional courses, the process course evaluation method is adopted to assess the students and test the teaching effect, pay attention to the students' learning process, cultivate students to develop a good learning attitude, and fully affirm the growth of students. When teachers evaluate the course, they will evaluate every link in the learning process of students. In the teaching process of Java Web technology course, the innovation and reform of teaching methods is an important way to implement the new teaching concept. The unified practical teaching is mostly the mode of teachers' explanation and students' passive learning. This mode is not very helpful to the improvement of students' practical ability, especially in the course of Java Web technology, which needs more practical education to enable students to have a deeper understanding of the phenomenon and principle of Java Web technology. In this regard, in the context of quality education, we should improve the traditional Java Web technology course teaching mode, and give students more time to think independently. For example, in the teaching process of Java Web technology course, we can strengthen the application of problem-based teaching method, and guide students to improve their ability to solve problems through the design of teaching problems. At the same time, mining students' interest, stimulating students' inner motivation and making them actively participate in learning can change the status of students' passive learning in traditional teaching.

Assessment part	proportion	Assessment content	Evaluation method	Equivalent results
Usual results	40%	Including attendance, learning of MOOC resources, homework, case analysis, etc	Based on learning data	40%
Training results	30%	JavaWeb training case	Teacher evaluation + student self evaluation + student mutual evaluation	30%
Final exam	30%	Multiple choice questions, computer questions, program analysis questions, application questions, etc	According to the scoring standard	30%
Total results				100%

Figure 2. Mixed teaching evaluation based on OBE education concept

The design of teaching problems should be student centered, interesting and vivid, and students should actively participate in the discussion of teaching problems. The design of the problems should be from easy to difficult, step by step, which will help students improve their comprehensive ability. In addition, in the course of JavaWeb technology teaching, students should be provided with more opportunities for self-training^[5]. For example, in the teaching process, through group teaching, teachers propose some website design projects, so that students can use various theoretical knowledge, strengthen the design and management of each web page, and strengthen the learning of computer technology and JavaWeb technology.

5. Conclusion

By stimulating students' interest in learning, thirst for knowledge and innovation ability, students can truly realize that practical training is a kind of fun and enjoyment, so that students can change from "I want to learn" to "I want to learn", and master knowledge and skills in this happy practical training process, so as to improve the teaching efficiency and quality. At the same time, it can provide more internship opportunities for students, such as cooperation with enterprises. Teachers can discuss some topics within the enterprise, design project practice, expand teaching content, no longer limit teaching materials, and lead students to research and study together. It can not only carry out practical education for students, but also promote the completion of some projects of enterprises, so as to achieve a win-win situation of school enterprise cooperation.

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