

Research on Optimization of Computer Basic Course System in Higher Vocational Colleges based on OBE Concept

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Abstract: In recent years, the medium- and long-term education programs from the central government to local governments have repeatedly emphasized the need to build a modern vocational education system that achieves lifelong learning. By 2020, a socially adaptive development, a high degree of uniformity in production and education, and secondary vocational education will be formed. Higher vocational education is interconnected, vocational education and general education are mutually guided, lifelong education is realized, an overpass for talent cultivation is built, a scientific and reasonable education system is established, and education modernization is realized. The key issue for this goal is how the overpass “builds”. This is not only a matter of method and method, but also a process-oriented or outcome-oriented (OBE) “idea” issue.

Keywords: Obe concept; Higher vocational colleges; Basic computer courses; System optimization

1. Introduction

Overview of the concept of OBE.

Wikipedia points out that outcome-oriented education is an educational theory whose core is that each component of the education system is based or guided by learning outcomes, and that each student should achieve this learning outcome after completing the educational experience [1]. In results-oriented education, there is no single designated teaching or assessment method. Teaching and evaluation should help students achieve the prescribed results, and the teacher's role becomes a mentor, facilitator or mentor [2].

Results-oriented education approaches have been adopted at multiple levels of the education system around the world [3]. The United States has been implementing the OBE program since 1994 and is constantly revising it. In 2005, universities in Hong Kong, China adopted the OBE method; in 2012, the EU proposed that education throughout the EU shift to focus on learning outcomes. The OBE education concept is an original education and teaching model that is explored and concise in continuous educational practice. On the one hand, it emphasizes that the cultivation of social compound talents must keep pace with the development of social development and education. On the other hand, it must integrate students' interests, hobbies and individualistic thinking, fully embodying "advance with the times" and "making with people." The educational philosophy of this. At present, domestic higher vocational colleges have used this advanced educational concept for the cultivation of skilled talents.

2. Second, based on the OBE Concept of Computer Basic Course Teaching System Requirements and Characteristics

Compared with the teaching system under the traditional teaching method, the teaching system of the OBE-based computer basic course has the following characteristics:

2.1. Emphasizing the learning process

The OBE concept is called outcome-oriented education. As the name suggests, it focuses more on the outcome of education than on the process. Careful exploration found that the OBE concept does not focus solely on results, and the whole process of learning is also highly valued. Through the standardized, reasonable and scientific learning process to achieve the expected learning objectives, the entire learning process and learning objectives are closely related. According to OBE's educational philosophy, every link should be arranged reasonably in the process of computer basic teaching in higher vocational colleges, for example: using advanced teaching methods, formulating careful teaching plans, and rational grouping. The characteristics of the basic teaching of computer science determine that the teaching is based on hands-on ability. In accordance with the training objectives of higher vocational students, in the process of teaching, the "three basics" thought is taken as the core, and the "quiet braking" learning idea is embodied.

2.2. Emphasis on learning outcomes

The OBE concept is also known as the educational model based on learning output. It aims to cultivate skilled talents that adapt to social development with a scientific, rational and innovative education model. In combination with computer-based teaching, we understand the results as: First, the results are not equal to the final test scores. Second, the results include the students' ability to experiment, the ability to innovate in science and technology, the ability to self-exploration, and the ability to adapt to society. Finally, the achievement and measurement of learning outcomes are not horizontal comparisons. More vertical comparisons are feedbacks on progress in a certain step in the learning process. The OBE concept is to treat each student as a part of being cared for [4]. Through continuous reflection and improvement in the whole process of teaching, the ultimate goal is to make every student a useful person for society.

2.3. New learning mode in which teachers and students change their roles, students are the center, and teachers are the instructors.

The OBE philosophy believes that outcome-oriented education is a statement that learners are expected to know, understand, and be able to do after completing a period of study. Its' clear claim that the results of learning are defined by learning outcomes. The learning outcome focuses on describing the learner's achievements, not the intention of the teacher to express the goal in a module or course. It can be seen that the teaching process under the OBE concept has changed the roles of teachers and students, students become the dominant players in the classroom, and teachers are the instructors. For example, relying on the popular micro-class, MOOC, rain classroom, blue ink cloud class, etc., the learning task will be issued in advance, encourage and guide students to learn knowledge points offline, and 3-5 people will discuss the group in the classroom. It truly reflects the student-centered teaching model of "doing middle school and doing middle school". The OBE education concept is a combination of "walking" and "knowledge". It only memorizes the book knowledge, but only knows it and cannot meet the training requirements of vocational education. "Knowing" is the fundamental way of vocational education. It draws knowledge from practice and practices in practice, eventually rising to theory.

2.4. Separation of teaching and testing, using multiple assessment methods

The OBE concept breaks the traditional evaluation system and adopts a multi-evaluation evaluation method [5]. As the name suggests, multivariate assessment is the use of multiple methods to assess a student's learning process and outcomes. Focus on the process evaluation of student learning in order to improve the evaluation of student learning outcomes; focus on objective assessments with

subjective assessments; focus on the flexibility of learning methods to change traditional mindsets; focus on self-comparison to improve competition between people; focus on assessing all aspects of teaching to change the decoupling between evaluation and teaching; paying attention to the growth of knowledge is a long-term accumulation process to improve the normal distribution of learning outcomes.

2.5. Emphasis on continuous improvement

The OBE concept follows the philosophical law of "know-practice-re-recognition", and drives the innovative talents as the driving goal. Under the guidance of the OBE concept, the system design is carried out to accurately implement the students' experimental ability, independent exploration ability, scientific and technological innovation ability and social adaptation. Improve the ability, improve the collaboration within and outside the school, timely discover the problems in the implementation of the results, sum up the experience in a timely manner, find the deficiencies, and propose and implement rationalization suggestions. The key to OBE's continuous improvement philosophy is to emphasize that continuous improvement runs through all aspects of teaching, and also to carry forward the work style of "continuous improvement is always on the road", highlighting the characteristics of OBE's teaching philosophy.

3. Second, the Analysis of the Teaching System of Computer Basic Course based on OBE Concept

3.1. Intensive lectures and inaccurate learning processes

Since the 1990s, the achievements of China's higher vocational education have been obvious to all. Nowadays, nearly 1,300 higher vocational colleges have survived on China's vast land, and along with China's reform and opening up, higher vocational education has been developed. The number of students in higher vocational colleges has increased year by year, resulting in a serious imbalance between teachers and students. The computer basic course is a compulsory course for freshmen in higher vocational colleges, and it is also a tool that must be mastered in the information age. In large classes, there will be problems with fewer teachers and more students in the practice session. Like such a highly practical subject, if there are few teachers to teach, it is inevitable to neglect management when arranging practical projects, group discussions, evaluations, Flowing in form. The students, because there are few teachers, some problems cannot be accurately guided in the classroom, leading to students have negative emotions, cannot complete the training content with quality and quantity, the learning effect is not good.

3.2. Limitations of learning outcomes

The traditional teaching method is "one volume of life", which is the result of the reality of higher vocational education in China. The result is that the results completely replace the results, ignoring the learning process. However, the effect of student learning is not measurable by a single test paper. For example, in practical training, students find problems, solve problems, hands-on ability, reflection and improvement ability are all forms of learning outcomes. Among them, the popularity of students in the internship unit and the ability to innovate are also a manifestation of the learning outcomes. Therefore, simply using the test scores as the only indicator to measure the student's learning is not scientific and reasonable, and will mislead the students.

3.3. The evaluation method is too singular, lacking in science and rationality

Most of the computer-based teaching evaluation methods in higher vocational colleges follow the evaluation and evaluation system under the traditional teaching methods, with the "normal grades (40%) + final grades (60%)" as the results given. The way this evaluation is lacking is rational and scientific. It should be based on the evaluation and evaluation under the OBE concept, that is, the learning process, the participation of the classroom, the emphasis on self-comparison, and the proposition of using knowledge. The change system of the evaluation system in traditional teaching is changed, and the bonus system is implemented. After a period of study and literacy training, students can get a certain score for each problem. The sum of the scores is the final score of the student. By observing the student achievement under the OBE concept, we can see what ability has the student improved. What are the abilities. Where is your own short board? Clearly, this is also not available in the traditional evaluation system.

3.4. Continuous improvement lacks internal impetus

At present, there is a clear lack of internal driving force in the continuous improvement of computer-based teaching in higher vocational colleges in China, mainly because students can get a graduation certificate as long as they have obtained the graduation requirements during their school years. From the students themselves, What kind of teaching method is not important, and there are no more ideas to change the status quo. For teachers, the school has no requirements for innovation. As long as students do not give advice, students have better grades, and they are basically thoughts that have passed and are not trying to innovate and reform the teaching model.

4. Optimization Path of the Teaching System of Computer Basic Courses in

Higher Vocational Education based on OBE Concept

4.1. Using the blue ink cloud class to accurately manage the learning process

At present, the construction quality and management efficiency of the teaching staff in higher vocational colleges are not optimistic. It is increasingly urgent to improve the construction of the teaching staff through some optimized management methods [6]. About the poor teacher allocation in the vocational colleges and the optimization method, the total number of teachers and the structure of the teachers is insufficient and the current status of the faculty is not good. The computer basic course is a public compulsory course for high-school students after entering the school. The number of students in each class is mostly around 100-120. In the absence of teachers, it is difficult for teachers to take care of each student. In the face of this situation, the teacher used the blue ink cloud class APP, student phone sign-in, grouping, sending tasks, discussion, feedback, evaluation and reflection. Among them, Xiao Lan is a teacher assistant (student), which improves the self-management ability of students. First of all, Xiao Lan is the teacher's assistant who can help the teacher manage the student's trusteeship. Secondly, the mutual supervision and management between the group members, the group and the group members is called mutual management. Finally, the student's self-restraint is self-management, and cannot be increased. In the case of the number of teachers, the "three management" enables schools and teachers to implement precise management of the learning process.

4.2. Clearly determine the learning outcomes

The OBE philosophy believes that learning outcomes refer to statements that learners are expected to know, understand, and be able to do after completing a period of study [7]. It clearly states that the results of learning are defined by learning outcomes. Learning outcomes focus on describing the learner's achievements rather than the intent of the teacher to use a goal in a module or course. The criteria for determining the learning outcomes of the computer-based curriculum should pay attention to the following aspects:

Learning outcomes should be divided into two parts, one is the phased outcome and the other is the final outcome. The staged results mainly refer to the results of a certain knowledge point or a certain module. The final result is the ability goal, knowledge goal and literacy goal to be achieved in a certain course.

Combination of qualitative and quantitative descriptions. In the description of the teaching results, the method of using quantitative assessment is clear and clear. If you blindly dilute the assessment results, it is easy to form a one-size-fits-all approach, and the teaching results are

only described in qualitative language, the scope of interpretation is large, and it is easy to produce ambiguity.

The descriptions of the quantitative and qualitative teaching and learning outcomes complement each other and overcome their shortcomings. The description is clear and clear.

The description of the learning outcomes under the OBE concept should consider the diversity understanding and use of the term "learning outcomes" such as Winter on (2006) and CEDEFOP (2009), and be recognized by all participants (teachers and students). Also consider all stakeholders [8].

4.3. Using modern teaching methods to improve teaching quality and enhance teacher-student interaction

In the era of "Internet +", we will fully apply modern network communication technologies, realize the development and sharing of curriculum resources, reform teaching methods, and expand the communication methods between teachers and students. For example, the established computer-based course network classroom provides students with a broad space for amateur learning under the constant construction and improvement of computer teaching and research classroom teachers. In the process of teaching, give full play to the guiding ideology of OBE teaching, take the mobile phone APP such as Blue Moyun class and rain class as the teaching platform, and use interactive video courseware as the basic content to build a three-dimensional, interactive and multi-study for students. Functional learning environment. In addition, MOOC, micro-courses, and flipping classrooms create a learning atmosphere in which teachers and students interact and participate in life and interaction.

4.4. Separation of teaching and testing, using multi-assessment assessment methods

The computer basic course is based on the various abilities and qualities that information engineers must achieve. Therefore, it is necessary to establish a comprehensive evaluation mode in which the teachers, the training teachers and the students are the main subjects, the learning process, the training results and the final exams are combined. Under such an evaluation mode, the evaluation of the course results adopts the "result + process". The "procedural" assessment methods such as team spirit, humanistic quality, and attitude towards things, greatly reduce the scores of the final theoretical examinations, improve the students' various abilities in the learning process, increase the proportion of the learning process, improve the scores of the usual learning, and focus on the students' abilities and attitudes. In the experimental teaching, in order to improve the students' interest in learning, mobilize the enthusiasm of learning, pay attention to each training class, discard the shortcomings of

only the experimental report to determine the experimental results, and establish a scientific and reasonable process evaluation. Assessment method. To this end, the process of training is composed of three parts: preview + practice + results, and the three parts of the learning process have different assessment criteria. Pre-class preparation is mainly to assess students' ability to find problems, solve problems, self-learning and comprehensive. The assessment criteria are based on the training tasks issued by the teachers, and the goals, methods and ideas of the tasks are formulated; the training operation section mainly assesses the students' analytical problems, the use of resources, and the practical hands-on ability. The assessment standard is to use the Office software in the computer skillfully, and to produce beautiful "results" according to the proofs; write the training report, mainly to examine the students' analysis. The ability to solve problems, solve problems, and summarize. The assessment criteria are complete content, no typos, no error in software use, and suggestions for reflection and improvement. Training score per unit = 30% preview + 40% operation score + 30% report score, total student score = 20% of training results + usual score 20% + 40% improvement score + 20% ending results.

4.5. Continuous improvement is always on the road

The talent training system under the OBE concept follows the philosophical law of "knowledge-practice-understanding" and aims to comprehensively improve the ability of vocational students to develop hands-on ability, innovation ability, problem finding and problem solving, and quickly integrate into social work. Vigorously improve the quality of talents of higher vocational students, transform the knowledge learned in books into true social work ability, and fully demonstrate the personality of students. In order to promote the continuous improvement of computer-based teaching in higher vocational colleges, the key points are as follows:

Improve the updated training system and reform the teaching method.

In order to enhance students' practical ability, they need to use various technical means to promote the reform of teaching organization and methods. For example, the internationally renowned educational software course management system has been widely used in thousands of institutions at home and abroad, its advanced technology and system stability have been fully certified. It not only has a profound impact on teaching strategies, but also on teachers and students, and has created an open and interactive teaching system.

Create an open and interactive networked training environment with good interaction, and solve the problem of student practice and innovation training.

By strengthening the requirements of the students' training process, reasonably formulating the curriculum com-

position methods, improving the teacher evaluation basis, and forming the external driving force for students and teachers to consciously integrate into the training room.

Encourage students to carry out research on innovative training, find out the problems existing in training and analyze the reasons, explore the optimal design and improvement methods of training, self-operation, self-exploration, self-study, and guide students to develop self-determination, cooperation, inquiry learning, and training. Students explore spiritual, scientific thinking, practical ability and innovative ability.

Establish competition mechanism and enhance self-exploration ability.

In order to improve students' ability to innovate and learn independently, and to quickly master the latest computer knowledge and technology, it is necessary to change traditional teaching methods, it is necessary to "do middle school", "doing middle school", "study to promote learning", and "promoting teaching by competition" to let students change their roles, from passive learning to active inquiry, into the environment of learning and learning, and fully experience discovery. Problems, analysis of problems, and happiness of solving problems.

Strictly complete the selection and basic training of college students' innovation teams, and enhance the ability of scientific and technological innovation.

In order to enhance students' ability of scientific and technological innovation and make scientific research better to feed back the teaching, it is necessary to create a college student's double creation garden, train its flexible use of computer knowledge in the form of actual combat, and cultivate students' ability of hands-on ability, innovation ability and pioneering spirit. Before most students participate in the innovation team, they often lack basic training in practical skills and need systematic training (basic skills training, targeted technical training, and innovative ability training based on science and technology competition).

Deep integration of production and exchange, improve social adaptability.

In order to improve students' social adaptability, according to the idea of "School Primary School, Social Classroom", carry out multiple forms of enterprise practice teaching, weaken the function of classrooms, strengthen the practice links, improve the overall quality of students' integration into society, and realize the school-enterprise Seamless integration of talent training.

5. Conclusion

School education is a place for knowledge innovation, character development and cultural heritage. The reason why culture is culture, stability, selective absorption, and long-term accumulation is the basic mechanism for schools to disseminate knowledge and culture. The essence of "OBE" is to cultivate innovative talents with innovative thinking and methods. "Therefore, applying the "OBE" concept to the computer-based curriculum of higher vocational colleges is precisely the need for innovative talents training in today's technologically advanced era, and it is also the inherent need of higher vocational students to reflect their individuality and express themselves. It advocates focusing on the initiative of students' learning, with particular emphasis on the mutual communication, communication and interaction between teachers and students throughout the learning process, and the mutual enlightenment and guidance of knowledge, emotion, psychology, wisdom and thinking between teachers and students. The core and key of the "OBE" education concept.

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