

Research on the current situation and strategy of computer course teaching reform in Higher Vocational Colleges in the “Internet +” era

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Abstract: in recent years, “Internet +” has become a hot word in all walks of life, and “Internet +” has also been vigorously promoted at the national level. “Internet + education” has also brought new opportunities for the development of education. In higher vocational computer teaching, “Internet + education” reflects the distinctive characteristics of openness, sharing and intelligence. This paper explores the teaching of computer courses in Higher Vocational Colleges in the “Internet +” era, analyzes several effective computer teaching strategies, and hopes to provide some effective references for the teaching of teachers.

Key words: “Internet +”; Vocational colleges; Computer courses; teaching model

With the rapid development of Internet +, Internet technology plays an increasingly important role in people’s daily life. In the field of education, Internet + technology plays an important role in promoting the development of educational modernization. In recent years, the Internet + technology has more and more in-depth influence in the computer teaching work, and plays an important role in meeting the needs of digital teaching resources and hardware equipment of computer majors. The emergence and popularization of “Internet +” new education and teaching means have introduced various teaching resources into classroom teaching in vocational colleges, which has reformed the mode of computer teaching in Higher Vocational Colleges on the one hand, and promoted students’ more comprehensive development of computer literacy on the other.

1. New changes in teaching in the “Internet +” era

1.1 Breaking the time and space limit of teaching

In the “Internet +” era, online learning platforms expand teaching space and break the boundaries of time and space. Students do not rely only on paper learning materials such as textbooks. Diversified digital learning materials play an increasingly important role in students’ lives and improve the efficiency of teaching. The good interactive atmosphere and rich teaching resources created by the online learning platform have effectively stimulated students’ interest in learning. Making full use of information technology to integrate learning resources and organically combine online and offline activities has played an important role in solving students’ knowledge confusion and improving learning efficiency.

1.2 Realize the sharing of teaching resources

Under the background of Internet +, the construction of network resources is very important. Based on online learning resources, students can watch and download videos online. For the training content in computer courses, students can practice and practice repeatedly after class. The rich online learning resources provide convenience for students to review and preview. Based on the online learning resources, students “review the old and know the new”. The computer teaching resource library organizes learning resources according to modules, and takes each knowledge system as a unit module to establish a video library and material library. Teachers can also upload relevant learning resources on the learning platform at any time according to teaching needs.

1.3 Personalized learning can be realized

Based on the Internet technology, teachers can increase the interaction with students, carry out online discussion and communication activities, answer questions for students anytime and anywhere, and enhance the pertinence of teaching. Rich online teaching resources also help students realize personalized learning. Students can selectively watch video courses and complete online test tasks based on their actual needs. The online platform records students’ daily online learning behavior and learning data. Teachers can more accurately master their learning situation by viewing students’ online learning data in the background. Combined with students’ learning characteristics, they can develop personalized learning resources and design extensible learning modules.

2. Teaching reform strategy of computer course in Vocational Colleges under the background of “Internet +”

2.1 Realize autonomous learning based on information learning resources

Based on a certain learning theme, we can maximize the mining and utilization of various resources through the network, and enable students to discover, explore and solve problems with rich learning resources, so as to enhance students’ information literacy. Students process these learning resources, transform them into their own knowledge, and then apply these knowledge to solve problems. Based on the learning theme, the digital resources are sorted out, and the digital resources are integrated by the traction and standardization of the theme, so as to serve the computer teaching. This teaching mode is task driven. Students first sort out learning resources, and then solve learning problems based on these learning resources to achieve the corresponding learning goals. The mode of organizing computer resources based on the theme enables students to immerse themselves in the learning of computer related courses and find their own value while solving

problems.

Learning resources are closely around the teaching objectives. This teaching mode fully respects the dominant position of students' learning, makes students become the center of computer course teaching, and effectively mobilizes their enthusiasm for learning. In the process of computer course exploration, resources play a vital role. For example, in Oracle database optimization, let students sort out relevant learning resources before class, sort out the performance optimization of Oracle database, problems in database performance optimization, and database performance optimization countermeasures. Based on these learning resources, let students discuss them first before class, So as to clarify the key and difficult points of this chapter is to listen to the class more pertinently. By sorting out the data, students find that the database performance needs to be optimized, and sort out the database performance optimization countermeasures for various problems. Through the process of data collation and discussion, students have formed a basic understanding of the contents of this chapter and have a basic grasp of simple knowledge points. It can be seen that the theme based learning resource collation method fully mobilizes students' learning initiative and improves teaching efficiency.

2.2 Introducing information-based teaching mode to build modern classroom

Educational informatization has promoted the continuous deepening of teaching reform, Proposed in the outline of the national medium and long term education reform and development plan "We should adhere to the innovation of teaching methods and actively explore teaching modes. Information based teaching methods and education modes will make the classroom vivid and specific. Under the information-based teaching mode, students' learning autonomy is mobilized, and rich classroom activities and vivid knowledge presentation methods make the classroom truly student-centered." indoctrination " In this mode, students passively accept knowledge, and their learning interests and needs are ignored. The information-based teaching mode creates a free exploration space for students, provides richer learning tools and materials, enhances the interest of learning, and makes the classroom truly student-centered. Micro class, hybrid teaching, flipped classroom, MOOC are all very popular information-based teaching modes in recent years.

Taking flipped classroom as an example, its core idea is to reverse the order of the two links of "teachers' explaining knowledge" and "students' internalizing knowledge". The traditional teaching mode is that teachers first explain the course knowledge, and then students internalize and understand the knowledge; In the flipped classroom mode, students learn independently after class first, and then teachers carry out targeted explanation according to the problems left by students in the autonomous learning stage, that is, "students' internalized knowledge" is put in front, and "teachers' explanation of knowledge" is followed closely. For example, in the course of "Optimization Countermeasures for waiting event problems", teachers first release video courses, and students watch video courses after class to understand the process of Oracle processing QL or pl/sql commands and the Optimization Countermeasures for waiting event problems, There are questions about "what type of SQL can use the same sqlarea, you can change the parameter to similar" and "how to use bound variables to avoid additional system consumption during hard parsing"; Then in the classroom, the teacher answers the students' questions, so that the classroom teaching efficiency is higher.

2.3 Problem oriented teaching, guiding students' exchange and exploration

With the further promotion of "Internet + education", the teaching work has increasingly highlighted the dominant position of students' learning. Based on the free learning exploration space and rich learning resources created by the Internet, teachers need to innovate the teaching mode and mobilize students' initiative to solve problems independently. The problem oriented teaching mode is a typical student-centered teaching mode. It is that teachers ask questions first, guide students' thinking with problem orientation, and then complete teaching tasks and achieve teaching goals. Problem oriented teaching mode plays an important role in enhancing students' problem solving ability and knowledge transfer ability. Under the problem-based teaching mode, teachers can first use information technology to create learning situations, display the problems of computer operation and system design in practice, and use the situations to promote students' in-depth exploration and thinking. The problem-based teaching mode builds a free interactive discussion platform for students, and students become the center of the computer classroom, Encourage students to actively find and solve problems, and exercise students' ability to independently apply knowledge to solve problems. In the mutual exchange and discussion, middle school students share learning experience and optimize learning methods.

For example, in the explanation of the relevant knowledge of "waiting event problems", teachers can ask students three questions: "why does hard analysis lead to waiting problems?" "How does the log file switch event cause the wait problem?" "How does the enqueue event cause the wait problem?" How to "anchor" the problem? After the teacher throws out the "anchor", the students will discuss the problem independently. Before the implementation of the problem-based learning guidance method, teachers need to create a problem inquiry situation for students. The designed questions should reflect the guidance and cohesion, and provide students with sufficient space for thinking and communication after asking questions, so that they can independently explore the laws of knowledge, grasp the internal logic of knowledge, and build a computer knowledge system under the guidance of questions.

2.4 Task driven teaching, students' independent problem solving

The task driven teaching mode uses the clear-cut and specific pre class preview task to guide students to carry out detailed pre class preview under the guidance of the target task, stimulate students' enthusiasm for learning and exploration, and lay a solid foundation for the follow-up efficient teaching. This teaching mode is based on rich learning resources. Based on rich learning materials, students can gradually sort out logic and solve problems. Thanks to the rich learning resources brought by "Internet + education", task driven teaching method is more and more widely used in teaching. In the task driven mode, students carry out independent inquiry and group discussion activities,

which will produce many problems in the process. At this time, teachers need to play the role of guide and collaborator in the process of students' inquiry, give students guidance in time, help students solve problems, and enhance students' self-confidence in independent inquiry and discussion. Sometimes, when new knowledge is integrated in the learning task, the teacher needs to explain the new knowledge, and then let the students discuss it to guide the students to form correct ideas. Teachers' guidance plays an important role in the task driven teaching mode, guiding students' ideas, helping students solve problems effectively, and making them truly experience the infinite fun brought by computer learning. In the task driven mode, the relationship between teachers and students is no longer just the relationship of "teaching" and "learning", but the relationship of equal communication, dialogue, learning and cooperation.

For example, when learning router technology, teachers can assign a learning task: installing routers. To complete this learning task, students need to understand the working principle and function of the router, and install the router under the guidance of the principle. On the one hand, this learning task deepens students' understanding of the working principle and role of routers, on the other hand, it enables students to master practical skills. When they can use the knowledge they have learned to solve practical problems, students' pride will be effectively improved, so they can actively invest in learning and improve the teaching effect of computer network technology. The task driven teaching mode makes students change from passive learning to active learning, which effectively improves the teaching efficiency.

Epilogue

Under the background of "Internet +", major changes have taken place in both teaching philosophy and teaching mode. The computer course is highly comprehensive, and its technology, theory and software are updated very quickly. Teachers of computer major in vocational colleges should constantly update their knowledge system, grasp the development trend of "Internet +", and make reasonable teaching plans, Establish a student-centered teaching mode to enhance students' enthusiasm and initiative in classroom teaching, so as to improve the teaching efficiency of the course.

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