Research on the Application of Micro Class Embedded Teaching Method in "Computer Application Foundation"

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Abstract. The teaching method of micro-course embedded teaching takes the teaching practice of "computer application foundation" as an example, and puts forward the advantages of using micro-course in the framework of integrated teaching design, embedded micro-course as component in different teaching modules, micro-class design, implementation and summary of thinking and other aspects of network technology to explore the combination of our classroom teaching an effective model.

Introduction

With the rapid development of Internet technology and communication technology, the information age has changed people's life and learning methods, so how to use the computer is particularly important. The basic course of computer application is a public basic course that must be elective for all freshmen in higher vocational colleges. The purpose of higher vocational education is to cultivate practice and innovation ability as the core to cultivate service for the purpose of employment-oriented, take the road of school-enterprise cooperation; training with comprehensive professional ability to be in production, service, technology and management And so on the work of the professional, application-oriented talent, so that both have professional knowledge and hands-on ability. Therefore, vocational education should be combined with business needs, focusing on practical teaching and skills training, emphasizing the cultivation of skilled personnel-based guiding ideology. How to meet the needs of society and enterprises, and according to the characteristics of students in vocational colleges and the basic teaching rules of computer application, it is applied to the teaching of basic courses of computer application to improve the teaching quality of computer application basic course, which is the current computer education worker a major research topic.

The Characteristics of Micro-Class and Its Advantages in Curriculum Teaching

In recent years, with the rapid development of emerging technologies, its education and teaching reform had a significant impact. At the same time, micro-course teaching model is gradually emerging. The micro-course mainly focuses on the micro-video as the core, and the micro-video records the process of teaching and learning in the process of teaching and learning around the key points, doubtful and difficult problems. Micro-class mainly includes micro-video, micro-teaching case, micro-exercises and other content, the time is often 5-10min, with short, small, refined, defensive features. As a new teaching resource, micro-class can support mobile and personalized, such as different learning methods. Micro-class embedded teaching has the advantage:

Micro Classes Are Flexible and Diverse. With the current education and teaching technology, micro-class micro-video as the main carrier, in which to add some auxiliary resources to form a real, vivid situation and the role of the process, help to abstract problems, difficult problems and key issues in-depth and student Understanding, more conducive to the memory of students. Through
micro-video, some production processes can be presented in the classroom. Such as the production of feed premix, can be produced through a premix production workshop animation or video, reproduce the real scene, while the production of front-line workers to help explain, real and vivid.

Micro-Class Is Short and Pithy. Micro-course length is generally not more than 10min, mainly for key and difficult issues in-depth explanation, in the classroom teaching can play the crowning touch. Micro-class embedded traditional issues cannot only attract the attention of students, increase student interest, while easy to grasp the key difficult problems. Although the micro-course is not the subject of the course, only as a supplementary teaching method, but it is more conducive to the overall content of the students to grasp and deepen the impression that students will be knowledge of the mastery.

Micro-Class Is More Targeted. Micro-class content is mainly on a knowledge point, a skill or experiment to carry out in-depth explanation. In the production of micro-class video, do not need to be exhaustive, more targeted. Students can also download their own micro-class, self-learning a point of knowledge, easy to learn, understand and master the key and difficult issues.

The Design Ideas of "Micro-Class Embedded" Teaching Methods

Researchers have suggested that the application of micro-class should first focus on the integration with the reality classroom, should be rooted in the real classroom. In the classroom can take on different roles: the introduction of the curriculum, the core concept of the story, the process of demonstration, after-school exercises, etc. - in the classroom integration level, the need to focus on instructional design, that is, students need analysis, combined with teaching tasks to determine Learning content, and deconstruction of micro-curriculum resources.

In fact, compared with some prominent themes, simple structure, clear objectives of knowledge, those with complex logic system of knowledge and theoretical background, especially in liberal arts courses in the culture and emotional communication still need teachers' co-ordination. Therefore, in the design of the original intention, we think that should be integrated in the teaching design, refers to the breakthrough in the past, classroom teaching lectures, students complete the homework outside the traditional teaching methods, classroom learning, extracurricular reading, exploratory research, group discussions into the course of teaching design. In the teaching of integrated design, the "micro-class" as a flexible component, can be embedded at any time in the corresponding teaching links. As a result of breaking the traditional way of teaching in accordance with the order of teaching materials, teachers need to integrate the original teaching content into a number of independent parts, the formation of teaching modules.

To guide the teaching process in order to guide the teaching process refers to the teaching of different modules, with the corresponding text as the core, to guide students to doubt, with the help of teachers to provide the answer to the micro-class resources, group discussion, the formation of a solution to the problem. To solve the problem for the purpose, to find the problem as the starting point to the knowledge theory to support the solution of the problem, after the problem is solved to understand more similar problems, and master the solution to similar problems. The basic link of students' individual learning is "finding problem - solution - knowledge background - divergent thinking". In view of the different links in the teaching process, the content of the micro-course provided by the teachers to the teaching can be divided into several different types: the enlightening thinking class, the literature resource class, the theory knowledge category, the case class, the cultural background class, the process is pushed to students at different stages of teaching.

To stimulate learning initiative, refers to the problem through the solution to the problem, to promote students in the Chinese interest in learning. Computer application foundation has a certain theoretical, but also a strong practical. In the content, teachers should choose practical and interesting questions to inspire students to explore the interest; in the form, teachers can use various means, especially multimedia means to attract students' attention, show the research process, to promote students to master the general study method. The students to solve the problem formed by the text, slides, video collective display and discuss the score, as the final score of the course of its important components, and under the guidance of teachers made micro-class resources for later
learning. These citation methods and means to stimulate the enthusiasm of students to learn and explore, received good results.

The Basic Situation of Computer Application Teaching in Higher Vocational Colleges

The Course Content Set Is Unreasonable. At present, many vocational colleges only focus on the theoretical and knowledge of computer application, the selected materials and course content is exhaustive, but most of the knowledge points are textbooks are undergraduate professional textbooks compressed version, which led to students learning, all the knowledge to understand some but all the knowledge is not refined, not deep learning, cannot be in-depth understanding, cannot reflect the higher vocational education to serve the social production line to cultivate students practical ability to practice the characteristics.

Knowledge Update and Practice Are Contradictory. With the rapid development of information technology and communication technology, computer technology is also changing. Compared with some traditional public courses, computer application basic course of practical and practical relatively strong, the knowledge update speed is quite rapid. Therefore, the computer application based teaching content should also be updated with the knowledge points and the corresponding adjustments. However, the current selection of vocational colleges is basically the textbooks of the teachers, and many of their own textbooks are the previous version, even if the revision but the content is not changed, the update of knowledge points cannot keep up with the development of information technology, and vocational colleges selected textbooks need a certain time, this time period takes about one to two years, during which part of the textbook content has often lagged behind the development of the computer which led to the students cannot learn the latest knowledge.

The Teaching and Practice Is Out of Touch. Computer application basic courses on the practical requirements of relatively high, just rely on teaching materials and teacher classroom theory teaching is not enough, students should strengthen the practice in the room practice, but many vocational colleges due to room tension, computer application basic course practice courses and theory the proportion of the curriculum is difficult to achieve 1: 1, let alone, the overall practice of teaching. This will cause students to understand and master some of the theoretical knowledge and basic concepts, but hands-on ability and practical ability to operate weak, alone in the face of a project or case, most students are often helpless. And the social requirements of college students is getting higher and higher, the recruitment focus on students to consider the practical ability, therefore, the traditional education is difficult to adapt to the needs of society.

Students Vary in Quality. In recent years, due to the impact of students, enrollment has undergone great changes, many vocational colleges alone enrollment, resulting in a substantial decline in the quality of vocational students. In particular, the proportion of single enrollment is increasing, and the economic environment of different regions is different. Some students have set up information technology courses in high school. Many information technology courses in underdeveloped areas are only arranged, which caused the computer level to be mixed. Due to the overall decline in the quality of students, teachers in the mobilization of students learning initiative becomes particularly difficult. And many students do not consciously adjust their own learning methods according to their own situation, resulting in their learning cannot keep up with the progress of learning subjective initiative greatly reduced. As the level of computer technology is quite different, and the strength of teachers in vocational colleges and laboratory equipment and other limited equipment cannot be based on the actual situation of each student into teaching, cannot meet the needs of all students. Sometimes students after school practice, due to the lack of teachers, the problems encountered cannot be resolved in a timely manner, long-term accumulation will greatly dispel the interest of students to learn and reduce student learning efficiency.

The Implementation Recommendations of Micro-Class Embedded Teaching Methods

The micro-curriculum embedded in the basic application of computer teaching activities, increased
the diversity of teaching methods, the specific implementation of the recommendations are as follows:

**Set Up a Professional Teaching Team.** Micro-video production is a larger project and a single teacher is difficult to complete these tasks. According to the needs of micro-class production and teaching, should be formed a teaching experience, student feedback better teaching team, organize you to find information, recording micro-class, through teamwork to optimize the content of micro-class, so as to ensure that micro-class recording work Smooth development.

**Record Production Line Situation and Enhance the Flexible Diversity of Teaching Methods.** For the basic part of the computer application, simply explain the written knowledge, narrative steps, is not conducive to students understand. On the basis of the collection of student opinions and team discussions, through the in-depth premix production line workshop, recording the relevant video, editing micro-course and timely push in the classroom, the production line into the classroom, more intuitive, easy to understand and Master these abstract processing technology, deepen the students' awareness.

**Make Attempt for Interview-Oriented Teaching.** The purpose of micro-course in the traditional teaching process, the purpose is to allow students to love learning, willing to learn, on a voluntary basis to accept the knowledge. Through the introduction of micro-courses, students can improve the interest and enthusiasm. In the micro-course production process, you can learn from TV or radio talk show some practice, try different 2-3 teachers or ask the teacher for a key or difficult to talk about the problem, the key issues to analyze and illustrate. This way as to watch TV, the way flexible, there is a certain degree of interactive effects. To avoid the past a single teacher for a long time about the drawbacks, so that students for a kind of thinking to accept the knowledge, to avoid boring, adjust the classroom atmosphere.

**Establish A Network Platform to Facilitate Student Access to Micro-Class Resources.** By repeatedly watching the micro-class materials and asked students to continue we can modify and optimize the micro-class materials. After the establishment of a network platform, the optimized micro-class resources stored in the network platform to facilitate students according to their own mastery of the classroom content of self-learning and review enhance the teaching effect.

**Conclusion**

As a new teaching method, micro-class teaching is becoming one of the key points in the construction of educational information resources in China. Micro-class builds a real and vivid teaching situation, focus on difficult problems breakthrough and the abstract content of the scene reproduction, the formation of a rich and diverse forms of teaching. It will be introduced into the classroom, to change the past mainly to a single teacher in the podium using "chalk + blackboard + PPT" teaching-based teaching methods, but also conducive to students under the autonomy of learning, so as to help improve the teaching effect. Micro-class embedded teaching methods will become the future and future curriculum reform important direction.

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**References**
