Application of Microlecture in Computer Literacy Teaching in Higher Vocational Colleges

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Abstract: With its diversified advantages, microlecture teaching mode has been widely used in the education and teaching of Practical Computer Literacy in higher vocational colleges. In the process of evaluating students' modern information literacy, students' mastery of computer information technology has become an important standard. Therefore, this paper makes a detailed analysis on the effective application ways of microlecture teaching mode in the teaching of Practical Computer Literacy in higher vocational colleges, so as to ensure that many advantages of microlecture teaching mode can be truly applied to the teaching of Practical Computer Literacy, and lay a solid foundation for further improving students' computer application ability.

1. Introduction

With the increasing coverage of computer technology, higher and stricter requirements are put forward for the teaching of *Practical Computer Literacy* in higher vocational colleges. In the process of carrying out the teaching of *Practical Computer Literacy*, higher vocational colleges should fully meet the personalized learning needs of students, focus students' attention on the teaching content designed by teachers, and ensure that the teaching mode adopted has high novelty and effectiveness. The microlecture teaching mode is a new teaching method produced in the process of the continuous development of modern information technology. Teachers design teaching videos in combination with specific teaching contents and students' learning interests, so that students can understand the key points of teaching by watching videos, so as to deepen students' understanding and memory of relevant knowledge contents through vertical explanation. By reasonably applying the microlecture mode to the teaching of *Practical Computer Literacy* in higher vocational colleges, it can not only assist students to actively study and explore the key knowledge content of the course, but also stimulate students' subjective initiative, enable students to develop good learning habits and establish lifelong learning ideas. It is an effective tool to improve students' computer literacy.

2. Development and Design Process of Microlecture Teaching Mode of Practical Computer Literacy in Higher Vocational Colleges

In the process of carrying out the teaching of *Practical Computer Literacy* in higher vocational colleges, through the reasonable adoption of the five-star teaching principle, it can ensure that the microlecture teaching content developed and designed can improve the classroom teaching quality to the greatest extent in a short time. The five-star teaching principle is a new educational theory, which can completely solve the problems of paying great attention to information presentation and seriously ignoring the effective teaching characteristics in traditional online teaching and multimedia teaching. The five-star teaching principle requires that in the development and design of microlecture teaching, specific problems should be taken as the core to ensure that each microlecture can involve various teaching processes such as activation of old knowledge, demonstration of new knowledge, tentative application, induction and summary of knowledge, integration and connection of ideas [1].

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In the process of developing the microlecture teaching mode of *Practical Computer Literacy* in higher vocational colleges, through the integration of the concept of five-star teaching principle, the actual development and design process can be divided into the following levels:

First, choose reasonable topics for microlecture teaching. In the process of topic selection, we should not only ensure that the topic is highly consistent with the content of teaching materials, but also present the teaching key points, teaching difficulties and key teaching problems, and design the name of the course content in the form of questions. For example, in the process of organizing students to learn 3D technology, the name of microlecture teaching can be designed as "Why is 3D printing technology popular?"

Second, design the teaching content of microlecture reasonably. In the process of designing teaching content, teachers should not only clarify the teaching objectives and teaching ideas, but also analyze the teaching focus in detail to ensure that students can fully master new knowledge driven by old knowledge, so as to improve the effectiveness of teaching content design through effective induction and summary.

Third, make effective microlecture teaching courseware. In the process of making microlecture teaching courseware, teachers should prepare video materials in advance in combination with the teaching content. On this basis, they should ensure that the courseware template and PPT effect can meet the cognitive and interest needs of students.

Fourth, effectively record microlecture video. In the process of recording microlecture video, teachers can record microlecture courseware by using webcam, smart phone, SLR camera, camera and other equipment with shooting function, as well as professional recording and broadcasting classroom. They can also download recording and broadcasting software in the computer, such as Camtasia Studio screen recording software, and present the microlecture teaching process in front of students through effective combination with PPT and other forms. Teachers can also take the way of mixed recording to upload the actual recorded and photographed content to the computer and fully integrate with the resources of relevant software.

Fifth, improve the effectiveness of microlecture teaching video post-processing. Teachers can use a series of nonlinear post editing software such as Premiere and Cmtasia studio to carry out post-processing operations such as microlecture video lens assembly and splicing on the microlecture materials recorded or photographed.

Sixth, package and output the microlecture teaching video. The forms of title animation, title, subtitle and ending that can meet the students' interest needs and cognitive characteristics can be added to the microlecture video, saved after confirmation, and uploaded to the class teaching platform [2].

3. Effective Application of Microlecture Mode in the Teaching of Practical Computer Literacy in Higher Vocational Colleges

3.1 Use Microlecture to Establish Powerful Microlecture Network Teaching Platform

Under the background of the continuous development of China's modern network technology, there are many kinds of network teaching platforms with high effectiveness and scientificity. At present, the network teaching platforms mainly used in the microlecture teaching of *Practical Computer Literacy* in higher vocational colleges include Blue Cloud Class, WeChat public platform, network teaching space, etc. Through continuous practice and research, we can know that the characteristics of Blue Cloud Class can be highly consistent with the teaching requirements of microlecture of *Practical Computer Literacy*. Teachers can upload the teaching resources of *Practical Computer Literacy* to the cloud class in time. Students can break the constraints of time and space by operating intelligent devices, and preview, learn and review the relevant knowledge content anytime and anywhere in combination with their own actual needs. At the same time, students' preview, learning and feedback of microlecture teaching resources can also be objectively presented through cloud class. It can not only effectively improve the informatization level of microlecture teaching of *Practical Computer Literacy* in higher vocational colleges, but also deepen

students' mastery and memory of relevant knowledge content [3].

3.2 Use Microlecture Resources to Carry out Flipped Classroom Mode

Under the background of the information age, flipped classroom is an inevitable requirement for higher vocational colleges to carry out the microlecture teaching mode of *Practical Computer Literacy*. In the process of designing the microlecture content, teachers can effectively integrate the cloud class platform and flipped classroom mode, and make the key and difficult contents of *Practical Computer Literacy* into microlecture teaching courseware to provide preview materials for students. In the process of face-to-face teaching in flipped classroom, teachers can carry out targeted microlecture teaching in combination with the feedback data of cloud class, reserve more time for students to discuss key knowledge content and practical operation in class, and give full play to students' dominant position [4].

3.3 Use Microlecture Teaching Activities to Give Full Play to the Advantages of Big Data

In the process of carrying out the microlecture teaching of *Practical Computer Literacy*, teachers can use the Blue Cloud Class to combine diversified modules such as micro practice, micro test, micro investigation and micro feedback. On this basis, through the effective application of big data technology, the actual state of students in the cloud class course records is objectively presented. It can enable teachers to clearly grasp the problems existing in students' learning process, so as to timely adjust the classroom teaching content, improve students' learning ability and achieve the teaching goal of efficient classroom [5].

3.4 Use Microlecture to Cultivate Students' Learning Interest and Autonomous Ability

In the process of organizing students to learn the relevant knowledge content of *Practical Computer Literacy*, in order to make students have the desire to actively explore and actively study the relevant knowledge content, teachers of computer specialty in higher vocational colleges can combine the current development of computer technology with the cutting-edge trends in the fields of computer culture, computer network security, information technology and so on, make microlecture teaching courseware and play to students. These contents can provide rich resources for students' learning after class, improve students' computer knowledge level, and cultivate students' interest and ability to learn computer related knowledge [6].

4. Conclusion

Through the reasonable application of the microlecture teaching mode, students can establish the ideological awareness of independent learning, improve students' interest in learning the relevant knowledge content of *Practical Computer Literacy*, create a good environment for students to effectively learn the relevant knowledge content of *Practical Computer Literacy*, ensure that students can obtain a high sense of achievement and self-confidence in the microlecture teaching mode, and improve students' learning efficiency. Therefore, teachers of *Practical Computer Literacy* course in higher vocational colleges should not only correctly recognize and attach great importance to the significance of microlecture teaching mode in improving students' computer literacy, but also have the ability to skillfully produce, operate and display microlecture video content, combine with students' actual learning ability, cognitive characteristics, interest characteristics and teaching content, ensure that the designed microlecture content is highly targeted. While continuously improving students' computer ability and literacy, we can cultivate a large number of excellent talents with high professional ability for the realization of the goal of all-round development of our society.

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