

## Research on the Making and Application of Micro Lesson in Computer Teaching in Secondary Vocational Schools

Yaru Yang<sup>1, a</sup>, Fangming Ruan<sup>2, b</sup>

<sup>1</sup>College of Big Data and Computer Science, Guizhou Normal University, Guiyang 550025, China

<sup>2</sup>Doctor of Engineering, Beijing University of Posts and Telecommunications, doctoral supervisor of Guizhou Normal University, Guiyang 550025, China

<sup>a</sup>1614208709@qq.com, <sup>b</sup>921151601@qq.com

### Abstract

As a brand new teaching resource, micro lesson is widely used in current teaching, and with the characteristics of short time, refined content and strong pertinence, it creates conditions for the reform of modern classroom teaching and personalized learning. In the secondary vocational computer classroom teaching middle school students' interest in learning generally is not high, learning initiative is low, the effect of classroom teaching is poorer, which requires the secondary vocational teachers using innovative teaching methods in basic computer classroom, the micro class into the secondary vocational computer teaching in the classroom, in order to improve the classroom teaching quality. Improve the teaching work Harvest the good teaching efficiency This paper discusses the understanding and application of micro course through the design and production of the appearance of computer basic presentation in secondary vocational schools.

### Keywords

Micro Class; Secondary; Computer Fundamentals.

### 1. What Is Micro Lesson

Micro lesson as the name implies is a small short course. Micro short course that is, there are certain restrictions on the time of micro lesson, the time of micro lesson is generally 5-10 minutes, the content is too short or too long is not conducive to the effect of micro lesson. Better play Micro class has specific and clear teaching objectives, and the teaching content is highly targeted, and the teaching effect is better. Generally, it is a small class that focuses on explaining a problem.

Micro class is based on teaching standards and requirements. Around a certain knowledge point in the teaching process of [1], as a kind of new type of teaching resources, and has a short micro class. Refining the characteristics such as content, and teaching design is different, the micro teaching pay more attention to the experience and effect of learners' independent learning, design is focused on how to help learners to achieve the depth of the content the significance of understanding and knowledge of construction[2]. In micro-class teaching, learning objectives are clear, learning resources are abundant, and individualized needs of students are more strictly cultivated, which helps students to master and apply computer knowledge and realize scientific and objective computer teaching.[3]

## 2. Problems Existing in Computer Teaching in Secondary Vocational Schools

### 2.1. Teaching Methods Are Single and Students' Needs Are Ignored

In lots of literatures and investigating students found that after the interview in the secondary vocational computer class, the students' learning motivation, the key reasons for low outdated equipment in addition to some of the common teaching and school teaching material is not reasonable, etc, and part of the students, classroom teaching method is single, in computer class, teachers only use the traditional teaching style of teaching methods, old teaching way, Content is boring, students passively accept knowledge, can not give full play to students' subjectivity, leading to students' low interest in learning, learning enthusiasm.

### 2.2. Traditional Classrooms Are Limited and Have Few Learning Resources

In the secondary vocational computer classroom teaching, most teachers adopt the traditional teaching methods, with the deepening of curriculum reform, some teachers try to introduce new methods and new ideas into the secondary vocational computer classroom Just become a mere formality, but many approach is not really to carry out, and there are many method is restricted by conditions do not apply to secondary class, at the same time for the available of teachers lack of all kinds of teaching materials, the school issued by materials Exercises content old version update slow, combined with secondary vocational students, learning enthusiasm is not high, poor self-control, is in the entertainment on the Internet In the game, rarely to learn to query information, it leads to secondary vocational computer classroom teaching content boring, classroom teaching efficiency is low.

### 2.3. Students Have Poor Learning Attitudes and Outcomes

Secondary vocational students for the "computer basis" teaching learning objectives are not clear, learning interest is not high, many students think that the computer basis and current social practice needs consistency is not high, and the vast majority of students think that the computer basis for the future work has no help, so do not pay attention to computer teaching. Many students in the process of basic computer learning, the theoretical knowledge is not firmly mastered, there is the phenomenon of high vision and low hand, students do not listen to the teacher's lectures and practical operation, they think they have mastered the knowledge, to the real practice of operation, and will not do all kinds of problems. However, due to the limited classroom teaching time, it is difficult for other channels to make up for the loss in the classroom. The online learning materials are mostly unsystematic and unmatched, which leads to the low effectiveness of students in basic computer skills, low ability in work, and unable to meet the needs of employers.

## 3. Advantages of Micro Class in the Computer Foundation of Secondary Vocational Schools

It is precisely because of the characteristics of micro-lesson, such as short and concise, good teaching effect and strong purpose of content, that micro-lesson teaching can be introduced into the basic computer teaching of secondary vocational schools, so as to solve the problems of low learning interest and enthusiasm of secondary vocational students and poor classroom teaching effect. Therefore, secondary vocational teachers need to pay attention to the basic computer professional use of innovative teaching methods, the micro class into the secondary vocational computer teaching classroom, lets the student can use the fragmentation anytime and anywhere to watch micro teaching video, not only make students feel boring, also in daily life constantly deepen students understanding of knowledge and understanding, It can effectively improve the students' preview before class and review after class. In the teaching of

computer basic specialty in secondary vocational schools, teachers can combine micro-lesson video with project teaching, task-driven, situational teaching and other new teaching methods to give full play to the advantages of new teaching methods.

### **3.1. Can Activate the Classroom Atmosphere, Promote the Relationship Between Teachers and Students**

Students go to school from the beginning, most of them are going through the traditional teacher speaks, students listen to the classroom teaching mode, the students have to adapt to and tired of this kind of 'the non-computer majors' education, especially for secondary vocational students, they often lively good move, do not love learning, and extremely sensitive and self-esteem, teachers tend to have more headaches, secondary classroom relationship between teachers and students nervous. And micro class as a new form of teaching, not only to systematically explain the knowledge in the classroom, but also can let students in a relaxed and active classroom atmosphere, weakening the resistance of students, make students accept easily, and use the small class students into the scene teaching, attract the students attention, to make the class lively and interesting, Easy for students to learn and easy for teachers to teach, thus promoting the relationship between teachers and students.

### **3.2. Can Improve Learning Enthusiasm, Stimulate Interest in Learning**

Secondary vocational school students generally are chosen after the rest of the students, most of the students theory foundation knowledge is weak, low learning enthusiasm, learning motivation is not strong, no goal and ideal, the class is to go to play mobile phone, reading novels, muddle along, especially for computer teaching the theory and real fuck sex are the stronger course, class phenomenon. And micro class can very good help secondary vocational students to overcome these problems, the teaching form is novel, brief refining for secondary vocational life full of fun, it overcomes the traditional teachers' full play in form of boring "duck" mode, to diversify the classroom teaching, introduce the small class teaching, not only can weaken the teaching difficulty, And can stimulate students' interest in computer learning, improve learning enthusiasm. Micro-lesson teaching makes full use of students' fragmented learning time, enabling students not only to watch in class, but also to watch anytime and anywhere, giving students sufficient time and space.

### **3.3. Able to Effectively Solve the Key and Difficult Teaching**

A lesson on the difficult, often is the knowledge students are more headaches, because the key difficulty is not so easy to understand, relatively and once students slightly distracted will keep up with the teacher's train of thought, plus most of the secondary vocational middle school foundation is not very good, ability to accept knowledge is not strong, the focus on the difficulty of learning effect is worse. Micro-lesson teaching is highly targeted. It can not only systematically explain knowledge, but also disassemble key points and difficulties in teaching. After class, micro-lesson can be sent to students so that students can review and consolidate according to the operation steps of micro-lesson. This requires teachers to make micro class, need to write teaching design meticulously, do micro lessons easy to understand, full of fun, so students will easier to accept and absorb, although micro lesson video clips of trouble, but simple and easy to operate, teacher very seriously when editing video, also can undertake computer course for the second time to consolidate. [4]

## 4. General Process of Micro-course Design and Production

### 4.1. Select Teaching Contents and Determine Teaching Objectives

#### 4.1.1. Teaching Content

In this paper, in the course "Computer Fundamentals" of secondary vocational school, "presentation appearance setting" this chapter as the research object of practice class, specific analysis of micro lesson teaching in the application of basic computer courses in secondary vocational school. The first step in making a micro lesson is to select a topic for the content of this chapter. Therefore, it is crucial to choose appropriate teaching content and determine reasonable teaching objectives for the micro lesson. Specifically, "presentation appearance setting" is the content in the fourth section, fifth Section and sixth section of the fifth chapter of computer Foundation. This part of knowledge is abstract and trivial, which may be difficult for students to learn, but this part of the content is the key and difficult point of this teaching, so students need to firmly master it. In content of this course, students in learning, and life will also frequently used for students to improve the students' interest and mobilize students' learning enthusiasm, "powerpoint appearance Settings" content is the practice operation, so the secondary vocational school teachers can be divided into different knowledge, through the micro lesson video show, implement multiple effective connection of knowledge points, Improve the effectiveness of computer network technology teaching in secondary vocational schools [5].

#### 4.1.2. Teaching Objectives

Teaching objectives are the effects or standards to be achieved by the subjects of teaching activities in specific teaching activities. For teaching objectives, secondary vocational teachers need to develop three-dimensional teaching objectives [6] to ensure the comprehensiveness and effectiveness of teaching. For the course "Presentation Appearance Setting", the 3d teaching objectives of micro-class are set as follows:

- (1) Knowledge objective: Students should be able to use the application theme of the presentation and add animation styles as needed, so that students can master the method of setting hyperlinks and timing screenings.
- (2) Process objective: Introduce new lessons by comparing works, so that students can put forward their own ideas while absorbing others' essence and cultivate students' consciousness of bold innovation. Let the students create freely, learn to design their own PPT.
- (3) Quality objective: Through the optimization of the teaching of powerpoint, let students continue to motivate themselves and show themselves. Through the application of the function in the exercise, experience success, train students to think positively, in the continuous attempt to acquire knowledge, master knowledge, active exploration of the scientific spirit.

### 4.2. Write Teaching Design and Make Micro Lesson Pieces

In the process of micro-lesson teaching design, it is particularly important to pay attention to learners' learning experience, adapt to learners' learning habits and meet learners' learning needs [7]. The theme of the micro lesson is set as "Presentation appearance setting". The purpose is not to explain completely how to set the appearance of the presentation, but to sort out what they have learned for comparative analysis, reveal the essence, clarify the task, and encourage students to master the knowledge naturally through comparison, observation and hands-on operation. Teaching design is an important part of micro-lesson production, and the final application effect of micro-lesson is closely related to the appropriateness of teaching design. Due to the short teaching time of micro-class, it is of vital importance for the teaching language to be accurate and concise. Therefore, in determining the teaching design, not only the language should be refined, but also the teaching content should be strongly targeted, so as

to accurately and clearly express the course content and solve the key and difficult points of teaching.

In this class, a new lesson is introduced by comparing the two versions of the presentation, so as to stimulate students' positive thinking, and then put forward relevant questions. The teacher leads students to learn new knowledge and solve relevant problems together. Knowledge learning is implemented in the process of solving problems. The teaching design is as follows:

(1) Compare works and introduce new lessons: students have mastered how to make simple PPT by learning the basic operation knowledge of PowerPoint. Compare the works to stimulate students' curiosity and interest in learning. Let the students watch the show and observe the points worth learning and the areas to be improved.

(2) Exploration activities: let the students add the appearance and animation effect of the work to their own presentation and see if the students can design their own work according to the effect displayed by the work.

(3) Ask questions:

Question 1. How do you get the appearance and animation effect in the presentation work? How do you use the application theme and add animation style in your own work?

Question 2. How to set up a hyperlink in a document?

Question 3. How to set timing screening when it is inconvenient to change the film manually during the presentation screening?

Students can watch the teacher's operation, follow the teacher to practice on the computer, and then enrich their own presentation by themselves. They can understand and absorb the knowledge of presentation appearance setting by using the application theme, adding animation styles, setting hyperlinks and timing projection of the presentation.

The importance of teaching courseware in the process of making micro-lessons cannot be ignored. Whether the teaching of a lesson is easy to understand, whether students can easily understand and accept, and whether the teaching ideas are clear, all have a great relationship with the teaching courseware. Now the courseware commonly used is PPT presentation, it can be the image, text, sound and other modern media combined together, making exquisite courseware. [8] After learning the basic operation of presentation in previous courses, students can make relatively simple courseware, but they are still not familiar with the operation of using application themes, adding animation styles, setting hyperlinks and timing projection of the presentation. While showing these effects, teachers should try to avoid too many dynamic effects in the production, courseware should be concise and clear, the interface design should be logical, and each teaching link should have hints on the courseware, which is convenient for students to study independently.

### **4.3. Recording Micro-lessons and Key Points**

At present, there are many ways to record/shoot micro-lesson videos. It is convenient and fast to use the screen recording software of mobile phones and computers to record; Screencast-o-matic and CyberLink YouCam were used for recording. You can also use professional electronic equipment to record directly; Camtasia Studio, Focusky animation demo and other software were used for recording.

For micro-lesson recording, the recorded script is essential. For the design of micro-lesson scripts, it is necessary to be as detailed as possible, from the explanation of concepts to the connection between knowledge points and other explanations. Attention should also be paid to the recording of micro lessons. There should be appropriate pauses in the process of explanation, natural harmony should be achieved, eyes and cameras should have appropriate

communication, and the knowledge point should be briefly summarized before the end of explanation to help students better grasp the key and difficult points.

## **5. Application of Micro Lesson in Computer Teaching in Secondary Vocational Schools**

### **5.1. Preview Before Class**

Secondary vocational students are relatively not enthusiastic about learning, and their theoretical foundation is weak. In the face of strong theoretical and operational computer courses, they tend to feel extremely boring, easy to lose interest in computer learning, and muddle along in class. And the use of micro-class preview will make the teaching effect of a lesson get twice the result with half the effort. After the above elaborate production of micro-class, teachers should make full use of micro-class preview before class, so that micro-class can play the most powerful effect in teaching. Before class, teachers can make the knowledge points involved in that class in the form of micro class and send them to students in advance, so that students can use the time before class to watch, understand the class content in advance, enter the state of learning, and prepare for the new class in advance. For example, in the above "Presentation appearance setting", teachers can show two versions of the presentation in advance in the form of micro class, so that students can see the appearance and animation effect of the work more vividly and intuitively, so as to stimulate students' interest in learning and achieve unexpected teaching effects.

### **5.2. In Class**

Due to the high theoretical and practical computer teaching, which is mainly composed of teachers teaching and traditional teaching means, already can't attract the attention of the students, and during lectures introduced in the class, can easily put some incomprehensible, and simplicity of the content of the abstract to concrete, so as to help students to master the theory of computer knowledge, reduce the financial burden on the classroom. At the same time, showing micro lessons in class can also make the tense and serious classroom atmosphere relaxed and active, so that students can study happily in the appropriate and pressure-free teaching situation. Micro-class can also guide students to conduct research and discussion on knowledge, which is conducive to the cultivation of students' independent learning ability and the improvement of their independent learning ability [9]. For example: in the interpretation of "PowerPoint appearance Settings", set in the PowerPoint hyperlinks and manuscripts showing the two operations of relatively complex, is not very good for students to master, at this time the teacher can use micro class shown visually in the form of image process, and you can also make students intuitively feel effect change.

### **5.3. After-class Consolidation**

The effect of a lesson is good or bad, and the consolidation after class also has a great relationship. Secondary vocational student's have many lessons to be learned, combined with the computer learning high operational practice habits, etc., if a student is just simple listen carefully in class, in the limited classroom 40 minutes, followed by the teacher, and not in the class of computer operation, practice to consolidate, that knowledge is especially easy to forget, also cannot despise so the teacher to student's study after class. After the end of a class, teachers should summarize the key points and difficulties, operation steps, matters needing attention and relevant knowledge in combination with the micro-class, so that students can learn and consolidate after class at any time and anywhere. At the same time, teachers can also set micro-lesson exercises of different difficulty according to the specific learning situation of students in the class, so that students can choose the content according to their own needs, so as to maximize the consolidation effect of after-class review. Such as: teachers together with

students in class and practiced, hyperlinks to PowerPoint setting, but the students did not practice after class, or when practicing forgot how "link to" - "E-mail address" operation, will lead to students' learning effect is low, so the application of micro teaching to consolidate after class is very necessary.

## 6. The Concluding

To sum up, the use of micro lessons in secondary vocational computers can not only greatly improve the efficiency of classroom teaching, but also maximize students' learning effect, stimulate students' interest and improve their learning enthusiasm. Today, with the rapid development of the Internet, there are numerous examples of introducing micro-lesson into computer teaching, and teaching resources are also extremely rich. However, when we search to learn, we will find that a lot of financial and material resources are invested in the form of expression of many micro-lesson videos, but the teaching effect is not satisfactory. It is manifested in the disharmony of teaching content logic, the disconnection of teaching content, the teaching knowledge being scripted and the language being difficult to understand and so on. In order to avoid similar problems, especially in secondary vocational schools, we should change our identity, analyze textbooks from the perspective of students, consider how to reduce the learning difficulty of students, adapt to the cognitive characteristics of students, carry out excellent teaching design from the perspective of students, and conscientiously write teaching scripts to make micro lessons. Micro-lesson is applied to all aspects of teaching, enriching teaching quality and promoting the diversification of school teaching, so as to improve the teaching effect of micro-lesson to the greatest extent.

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