

Research on Project Based Micro Class Teaching Model

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Abstract. This paper based on the theory of constructivism, as a model driven by the task, to the project as a carrier, with the goal of integration, the deconstruction of theoretical courses and experimental courses, break the structure, scattered chapters, refinement knowledge, highlight the typical, integrating theory with practice, combined with the engineering practice should be used, consisting of heavy foundation to focus, by simple to complex, from theory to practice a series of projects and research projects; setting analysis of classification, project implementation, project implementation supporting resources integration process analysis. The final breakthrough for micro class learning resources construction, make it more and more widely used, especially to explore the formation of micro structure and integrated system of technical support services, is conducive to further reform and development of higher education of modern technology.

Introduction

The project teaching method is to "take the project as the main line, take the student as the main body, supplemented by the teacher", changed the past "passive teaching mode, students listen to the teacher talk", creating the students' active participation, cooperation and explore new teaching mode.

Micro classroom online instructional video is a course based on knowledge points and short online video for learning or teaching purposes. Teach only one or two knowledge points, simplify the curriculum system, specific teaching objectives and teaching objects, although many people call it "fragmentation". But a micro class itself still needs to be systematic, and the knowledge expressed in a micro class still needs to be comprehensive.

Study on Micro Teaching Based on project is necessary, according to the steps of the project decomposition by micro class form, micro teaching, teaching into animation design can be boring principle of content specific, interesting, for freedom of choice, different learning content at any time, enhance memory [1].

The main problems existing in the current project teaching

Nowadays, project teaching has been applied to teaching, which can improve students' ability to analyze and solve problems, and improve their ability of autonomous learning and application of knowledge. However, there are still some problems.

Students are not used to changing roles. The students have to adapt to the "teacher talk, the students listen to the traditional teaching mode, due to the limitation of the quality of the students themselves, therefore need to continue implementation of the" student "and" occupation "two kinds of roles in students' Project Teaching in the process of communication, however, need to change the role of project teaching can not meet the students.

Some students have weak learning basis, and there is no corresponding theoretical guidance, which can not meet the requirements of the project teaching [2].

Project tasks are difficult to control. When designing a project, the teacher can not take account of all the students' actual situation. Because there are cognitive differences among students, different students have different views on the same task. Students who have difficulty with the same task can not only arouse their enthusiasm, but also attack their self-confidence.

There is irrationality in group cooperation. The purpose of project teaching is to achieve a complete

project, students as the main body. During the completion of the project, students can not only master the knowledge transfer skills, but also adapt to team work and help each other. But in practice, if the team is a free group of students, the team lacks the ability to balance consideration, if a teacher dominated complementary project team, the project can only be completed by the ability of the students, the students' learning ability weak dependence will increase, learning enthusiasm decline [3].

The project instructor was unable to keep track of the situation. Project teaching reform emphasizes students' independent inquiry, but needs the help of teachers. However, since teachers and students usually have 1 to 40 or even 1 to 45 or more in the classroom, it is difficult for teachers to pay attention to students who are in trouble. Therefore, when students encounter difficulties, it is difficult for teachers to follow up in time and give advice or solutions. Therefore, it is necessary to review and explain the knowledge points constantly during the process of the project implementation. However, in the process of project teaching, because of the lack of timely theoretical guidance by teachers, the implementation of the project has been difficult, greatly reducing the effectiveness of project teaching.

Feasibility analysis of micro class development based on project teaching model

Through project teaching methods, students can learn new knowledge and master new skills. Teachers can better teach both theory and practice through project teaching methods.

The biggest characteristic of the teaching mode of project curriculum is a process of educational practice and occupation practice seamless connection, teaching process and teaching effect are closely linked, in addition to knowledge, including the occupation morals, knowledge, ability and occupation quality, characteristics of higher education and the Chinese goal is consistent with [4].

The main strategies of micro class development under project teaching mode

This method is the improvement and development of the project teaching method, which is characterized by clear tasks and guide, make students think independently, answer, find out the method to complete the work, the independent planning and implementation plan and evaluation plan, check their results. The focus of teachers' work is to make micro class video, teaching preparation stage, and to cultivate students' creative ability and adaptability to environment without the help of practical teachers. This method fully embodies the characteristics of teaching students according to their aptitude. That is to say, according to the students' personal circumstances, they can learn more and fully explore the potential of each student. Adopting group work method can cultivate students' sense of cooperation and cooperation ability [5].

The role orientation of teachers and students in project based micro class teaching method is shown in table 1.

Table 1 Role orientation of teachers and students

Teacher	Student
Propose core issues and project objectives	Collect information independently
Exchange advice; provide a help plan	Plan independently
Provide guidelines and discuss issues	Independent implementation plan
Results of inspection and evaluation	Independent test

The main task of this method is to establish the relationship between the project and the knowledge and ability that it needs, that is, what knowledge should be understood and what skills should be possessed by the students. A typical boot text based on the work process can be an independent production preparation process or maintenance process.

Take the employment as the guide, to learn the knowledge, ability and quality structure of the main line to design students to cultivate the ability of technical application; according to the needs of the automotive service industry, "practical frontier" principle to construct the professional curriculum and

teaching content system; training of motor professional job skills is to highlight the characteristics of higher vocational education, teaching content we should pay special attention to the training of basic skills, professional skills and core skills. We can do some project teaching methods for automobile specialty, such as automobile, electrician and electronic basis, history of automobile development, introduction to automobile service engineering and so on. The main technical route is shown in figure 1.

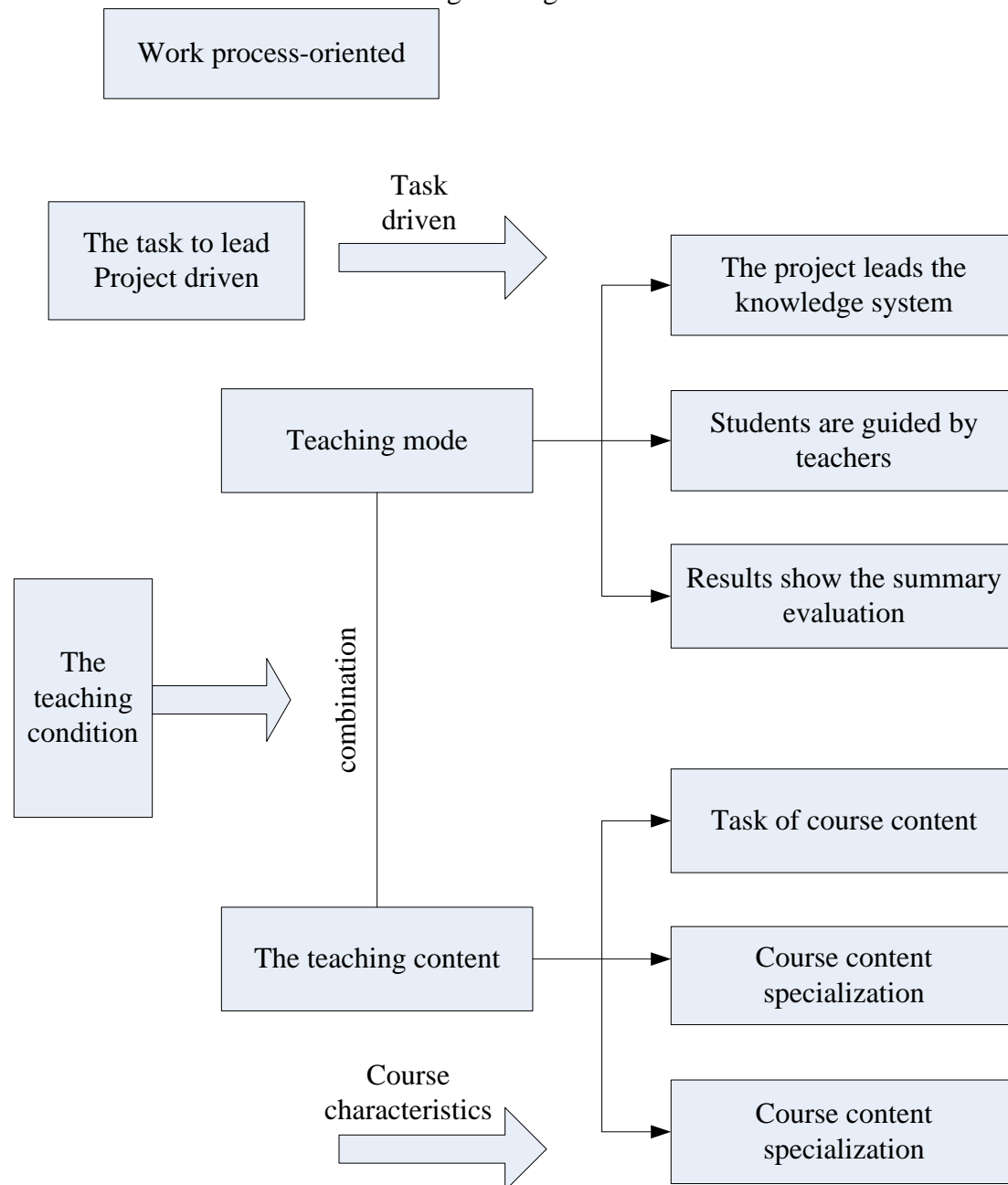


Figure 1. Technical route

The specific implementation process of micro class applied in Project Teaching

Types of "micro class". Micro class core resources are micro video, micro lesson plans, teaching design, micro courseware, micro movement, micro reflection and other auxiliary teaching and learning content". The duration of micro video is usually 10 -20min.

Teaching class: mainly based on subject knowledge and key points, difficulties, and examination places. The teaching forms are various and not limited to classroom instruction;

Problem solving class: Aiming at typical examples, exercises, examination questions, analysis and reasoning calculus, it focuses on the analysis and process of solving problems;

Q & A: around the subject difficult to analyze and answer questions;
design, operate and demonstrate the teaching experiment;
those mentioned above may be assigned to this category.

Experiment class:
Other categories: works other than

Adjustment of teaching methods and means.

(a) The task-based teaching method is adopted, and the teaching methods, such as teaching method, demonstration method and verification method, are introduced into the project teaching method.

(b) Follow the history, theory teaching automobile are taught in the ordinary course of multimedia classroom, and the corresponding logical relationship, design process, rely on the teacher's teaching, it is difficult to arouse students' learning interest and enthusiasm, and mobilize their enthusiasm.

(c) Design

Teaching plan design: around the theme, the main line is clear, focused, effective, logical, clear and easy to understand.

Teaching method design: select the correct design of teaching strategies, arouse the enthusiasm and creativity of students' thinking, select appropriate teaching methods according to teaching needs, and make use of reasonable information technology means.

Organization design: organization and arrangement of teaching, in order to meet the students' cognitive ability; the teaching process, from the main line, clear, logical, clear and easy to understand; the organic combination of highlighting the subjectivity of students and teaching activities.

Teaching characteristic design: the form is novel, the teaching process is simple, vivid, interesting and enlightening. The teaching atmosphere is helpful to improve the initiative of the students. Effectively solve the problems of practical teaching and improve students' thinking ability.

c. Video recording. According to the needs of the automobile major course, take "automobile electronic circuit Protel" as an example, carries on the micro class video recording: the Protel99se schematic design, the drawing, the PCB generation, as well as the circuit board manufacture.

Concluding remarks

In the automotive specialty course based on project teaching method, concept oriented, micro class as a means of teaching; student-centered, teacher led, inspire and guide the new teaching mode of students' active participation, cooperative and exploring. Study on the characteristics of automobile specialty, considering the knowledge and practical operation of students to work in the days after the application of the design, so that more targeted and focused on. Let students debug according to the micro class, and analyze and improve the problems encountered during the debugging process. To provide students with a new, open and practical teaching platform and carrier, in order to truly cultivate students' innovative thinking and comprehensive professional ability.

According to different majors, the same course for different, set the corresponding task, selection and application of appropriate items, the working process is integrated into the project, the project settings should cooperate with technical experts and industry enterprises to negotiate, jointly designed by secondary and higher vocational education needs as the goal, from simple to complex, from single to comprehensive, from general to special, one by one set of project tasks.

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