Using Information Technology to Flip the Classroom form Design Framework to Study the Whole Teaching Process

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Abstract. The use of education information, new technology and "flip" classroom teaching theory to design the teaching contents, independent design and development of teaching video. Design for autonomous learning, teaching contents, teaching activities and teaching cases, design process and implementation of assessment index method. And choose the appropriate teaching platform and tools, build in accordance with students and teachers' independent teaching environment. In the general rules of classroom teaching design Row, on the basis of the formation of new type of classroom teaching process design framework.

Introduction

The ministry of education issued the "development plan of education information decade (2011-2020)" in the advanced information technology integrated with the depth of the university classroom. In order to achieve the goal of "deep integration". Teaching in colleges and universities need to blend in the new teaching concept, new teaching mode and new learning style, this will be the future college teaching reform and innovation and the important way to improve the teaching quality.

In traditional teaching, most still use "teacher taught primarily" mode of teaching, the teaching mode in the process of implementation. In a lot of shortcomings, mainly reflected in teaching time is long, the content, the more the easy create cognitive overload, influence learners' learning effect, Ignoring the differences of teaching object, ignored the students' individual needs, Lack of independent activities of college students, to suppress the students' question, explore, the phenomenon such as the development of innovative ability, In today's along with new ideas and new technology constantly emerging, network technology, information technology and curriculum integration under the background of gradual deepening, we should have "promote interaction between teachers and students, let students to autonomous learning, collaborative learning, and be able to have calculation thinking ability, make teachers improving the capacity of curriculum development, personalized guidance, teaching ability of organization," as the ultimate goal of teaching and learning.

To train the student to utilize the theory knowledge to ascend the practice innovation ability for the teaching goals of colleges and universities teaching, is to realize the combination of theory teaching and practice teaching, to build a "student-centered" teaching mode, realize the personalized teaching, trains the student to use a variety of teaching resources to complete the autonomous learning, strengthen students' independent thinking and the ability of cooperation and communication, can make its have the innovative talents.

For this purpose, the teaching reform train of thought of this paper is to use modern education information technology and "flip" classroom teaching theory, to design the teaching contents, independent design and development of teaching video and other means, the design is suitable for the teaching contents, teaching activities and autonomous learning teaching cases, the design process and implementation of assessment index method. And choose the appropriate teaching platform and tools, build in accordance with the mobile learning environment. In the classroom teaching design on the basis of overall planning, form a complete process of classroom teaching based on online learning platform design framework.
The Teaching Process Design

Teaching design framework is "teachers as the leading factor, the student as the main body" teaching design concept, will complete a teaching process is divided into three stages of before, class, after class to the overall design, and teaching design framework of hu the design of the teaching resources, teaching design, teaching evaluation content design combination of three parts. Design is completed before the class, teaching resources contain tiny learning resources, learning, learning tasks, guide case online learning platform resources, In the design of the teaching activities in class, contains knowledge warm-up, questioning and answering questions, communication, discussion, the results show, To complete the design of the evaluation content in class, including questionnaires, teaching evaluation, such as learning evaluation form.

Giving students prepared before class, the teacher should guide case and micro video, students learning task arrangement and requirements such as the teaching resources for students to determine planning their own learning process, such as autonomous collaborative and inquiry learning, so as to realize the imparting of knowledge, In the process of curriculum implementation of classroom teaching, teachers must carry on the knowledge of teaching, teachers and students to question and answering questions, discussion, the instruction, the common problems of personalized problems solution process, such as, in order to realize the current course content and target classroom digestion of knowledge, For example, classroom teaching activity: for "knowledge refine" should be completed by the students under teacher's guidance in class learning knowledge extraction, In knowledge "warm up" section, should be in the form of q&a, correct detection of students' learning situation before class, and according to the actual application situation, the teacher put forward the expansion of knowledge application problems, Link of "question and answer" between teachers and students, the teachers and students should be aimed at problems of personalized before class: communication, under the guidance of the teachers and students in teachers together to analyze and understand the problem and seek the answer to the question, "Group discussion, the problems in the targeted basic results show", should be aimed at students of common foundation problems under the guidance of the teacher through group discussion and cooperation to seek the answers to these questions by the students, to encourage students to better understanding of knowledge, On expanding problem of targeted "group discussion, the results show," should be under the guidance of the teacher through group discussion, collaboration to seek answer by the students, promote the students "knowledge transfer".

In the "common problems to solve, to cope with the common problems existing in the learning before class teachers to answer. At the end of the course, teachers should use quantitative or qualitative methods to evaluate the teaching effect of the test and analysis.
The Teaching Implementation Plan Design

To common development, for the purpose of teacher and students in curriculum has the common characteristic in the course design in the process of three phase five teaching plan. To design based on the three stages of teaching process, for each stage of design in the process of the concrete implementation method, the role of allocation and implementation effect evaluation.

The Curriculum Resources the Preparatory Stage

This stage take teachers as the main body, the teacher taught courses by using information technology curriculum resources development, complete the construction of learning support system, prepares a link of the reserves. Among them, the learning support system is the support of learning. This system mainly includes such as video, online learning support platform of teaching resources, teaching plan, learning guide case, learning tasks, etc. Can be used in the specific means of micro video recording software and green screen, screen after recording screen dig screen and synthesis technology. Can also be inserted in the video window design in order to increase interaction between students, enhance the charm of learning resources for learners. Moreover, due to resources in the online learning platform has the characteristic of miniaturization, disk, and large quantity cause learners get lost in the process of learning, so, we will make course design "course learning guide".

Study the Improvement of the Preparation Stage before Class

Take the student as the main body to carry out online autonomous inquiry-based learning, realize the imparting of knowledge. In the two weeks before the start of each of the classroom teaching, teachers should use online network platform to release new week course learning tasks, learning resources and requirements. Learning resources can include micro video, courseware, test, knowledge learning, learning tasks, guide case for learner autonomy of different cognitive styles to choose. In order to be able to fully arouse the enthusiasm of students' online learning, initiative, stimulate students' learning potential, should be designed for the students learning task, strengthen the details of the mission. Such as to guide students to maximize the carry out autonomous learning before class, so in the learning task deployment should be the content of the base for learning knowledge and expand the application content focuses on design. Basic content notice is the foundation of knowledge, as long as the force that relies on learners' individual can be completed, And develops the content of application is to promote the students consolidate and deepen the understanding of "knowledge" and "migration" of knowledge and comprehensive application questions or projects, according to the result of the anticipation of the development level of students' potential, designed to better stimulate students' curiosity, provide teachers guide students to make full use of online learning resources platform and mobile learning environment for learning resource access and exchange, so as to improve the utilization ratio of resources at the same time, also let learners learn to use cooperation to explore the way of clear insight.

Course Teaching Stage

Dominated by teachers to students as the main body, through the communication between teachers and students, collaboration, and sharing together offline classroom teaching activities such as study, implement the digestion of knowledge.

In each classroom teaching activities of practice, "knowledge refine" link through the form of a question knowledge points the main content, "Knowledge warm-up" link, use the "correct knowledge" or "classroom quiz", in the form of the first two steps is to understand a student learning situation before class. "Knowledge warm-up" link after class activities is a kind of for teaching basic knowledge part of the teaching content, to the training of the students basic knowledge of comprehension, implementation method is students questioned, the classification of the communication between teachers and students, teachers, personalized guidance. The other is some applied strong knowledge in the course of teaching, teaching content to students learning before class by the universal problems existing in the teaching on the way to give answers.
After-school Test Evaluation Stage

For students to carry out the test and evaluation, research data, statistical analysis, realize the evaluation of teaching effect.

We can use each of the course teaching small classes of test scores compared with traditional teaching class in the examination and analysis through the online platform for curriculum design of "teacher, the student main body" teaching mode of teaching effect, In questionnaire content from the student for the whole teaching pattern recognition degree and the schoolwork burden, learning resources and attitude in class discussion and Suggestions of their subjective aspects such as rhetorical questions. When close to the end of the course, let the students to fill in the questionnaire, collecting data after statistical analysis.

Summarizes the Work Stage

After any of the whole process of teaching and curriculum implementation, need to be reviewed and summarized. Achievements and the deficiencies and problems, in view of the problems are analyzed, summarized in the implementation of the plan will face the challenges, the need to strengthen the matters and the deficiencies, for these situations in the future to how to improve in practice in order to improve the follow-up teaching and practice effect and provide reference.

New Education Concepts and Teaching Behavior, Contributed to the Implementation Plan and the New Teaching Model

Relying on new technology, such as online platform to the classroom teaching the knowledge and skills to the class of consciousness study is completed, the class will high school students through group discussion, scene simulation, knowledge presentation, communication between teachers and students a variety of methods, such as the internalization of knowledge truly, can the traditional teaching mode of "knowledge" and "knowledge internalization" process, into a class with the aid of network, the teaching video, notes and other resources to complete knowledge of autonomous learning, and then in the classroom knowledge, discussion and exchange, teacher use of questions, misunderstandings, solutions, and explore the teaching method, causes the student to complete the knowledge internalization of a kind of teaching mode. This model reflected the new information, new technology application, also carved out a new teaching mode of thinking, excavate the potential of students learning, embody the personal growth of students.

Both teachers and students, in this new learning mode change from passive to active. Students
with the help of modern technology actively, personality to study under teacher's guidance. Teachers with the help of modern technological means to carry out the classroom, extracurricular learning process, strengthening the students' autonomous learning, enhance the independence of the students' thinking and learning autonomy. These to the improvement of quality of personnel training and comprehensive is also a positive role in promoting.

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References