

Research on Online and Offline Mixed Teaching Based on the PAD Class

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Abstract: Mixed online and offline teaching is a popular and commonly used teaching mode at present. Using the network platform to realize the synchronous complementation of online and offline teaching can effectively improve the teaching efficiency. However, in the practical application of various courses, how to divide the proportion of online and offline teaching content, how to deal with the relationship between online and offline teaching scientifically, and how to improve the management of online teaching need to be further studied and innovatively explored. Based on the concept of PAD(Presentation-Assimilation-Discussion) class, this paper splits equally offline and online teaching into class, and be PAD class teaching into two classes, which effectively solves the problems existing in traditional teaching and provides a new way of thinking for continuous optimization of classroom teaching mode.

1. Introduction

On the core concept of PAD class is the class time is divided into two parts, one for the instructor and the other for the students. Teachers and students "split" the class, and the time of teacher's teaching and students' discussion and exchange is staggered, in the middle of the introduction of independent learning link. Let students have a certain amount of time for independent learning, personalized internalization and absorption.

Mixed teaching refers to a strategy that comprehensively utilizes different learning theories, techniques and methods, as well as different application methods to implement teaching.

The essence of mixed teaching is a kind of teaching strategy, which is implemented by network technology. As a form of teaching organization, the combination of the two can make up for the lack of traditional teaching. Teachers and students "split" the class, and the time of teacher's teaching and students' discussion and exchange is staggered, in the middle of the introduction of independent learning link. Let students have a certain amount of time for independent learning, personalized internalization and absorption.

2. The Main Problems Existing in Current Classroom Teaching

2.1 Slow Updating of Teaching Concept and Great Influence of Traditional Knowledge View

Knowledge view is the fundamental and foundation for the subject of education to determine teaching objectives and implement teaching with different teaching methods and organizational forms based on different understandings of knowledge itself. According to the traditional view of knowledge, knowledge is "an accurate description of the established world made by individuals through keen observation and rational thinking", so knowledge must be objective and correct. Affected by this concept, classroom teaching becomes the transmission process in which objective knowledge is accurately transmitted from the teacher's mind to the student's mind, which weakens the importance of the interaction between the teacher and the student, reduces the requirement for the student's active learning, and fundamentally restricts the classroom teaching effect.

2.2 Single Teaching Methods and Insufficient Exploration and Use of New Models and Methods

Based on the traditional concept of knowledge, the curriculum teaching mainly adopts the traditional teaching method, faculty according to the prepared lesson plans and courseware, teaching according to the predetermined thoughts system, focuses on the systematic structure of knowledge, in the middle with occasional questions and discussion, but deep enough questions to discuss, set the question is too simple, the phenomenon of "to ask and ask" is more common. The teaching methods, such as discussion type, case type and mixed type, which are mainly characterized by discussion and exchange, are only in the experimental stage in the classroom teaching practice and have not been widely promoted and used. Classroom teaching often appears the phenomenon that the teacher speaks and the student listens, the teacher indoctrinates the teacher actively and the student passively receives the teaching, the student passively accepts the knowledge passed by the teacher, the class participation degree is not deep. With the standardization and standardization of teaching, a slightly rigid teaching mode has gradually formed. In teaching practice, teachers often explain theoretical knowledge on the platform and "force" the theory to the students, and seldom go down the platform to communicate, discuss and ponder with the students. Students listen to the lecture, practice, discuss, answer and other activities step by step, some even immerse themselves in their own world. The teaching that should be two-way interaction has become a fixed form of one-way operation. "teaching" and "learning" are separated, and the classroom cannot realize the two-way and interactive nature of teaching. The position of "student subject" is not enough, the classroom interaction is insufficient, and the classroom atmosphere is more serious and lively.

2.3 Lack of Effective Assessment Methods and Learning Motivation

At present, the main way of course assessment is still the final assessment, and students are easy to receive the wrong signal that "assessment is the purpose", which is manifested in the common phenomenon that teachers and students "teach for the sake of examination and learn for the sake of examination" in teaching practice. Both sides of the teaching set the teaching goal as passing the examination, and students lack of motivation for spontaneous learning. In addition, the examination is mostly carried out in the form of closed-book written examination, which is relatively simple. In terms of knowledge and teaching objectives, it can neither truly reflect the teaching effect nor become the motivation for students to study autonomously.

3. Basic Strategies of Online and Offline Mixed Teaching Based on the PAD Class

In order to carry out the teaching idea of "taking students as the center", the concrete implementation strategy of mixed teaching based on the concept of split is explored and formed. The basic process and content are as follows:

3.1 Update Knowledge View and Clarify Teaching Objectives

The so-called new view of knowledge in the educational circle is that knowledge is the product of the joint construction of teachers and students from the perspective of "relationship". Specifically, the new knowledge view was that "all what we call 'knowledge' is a social construction, we are talking about the world is not an external image of the world, but in order to achieve a particular purpose and choice of the use of words, are selected from the possibility of an infinite number of a kind of" explanation ". Therefore, there is no 'true description' in the traditional sense, no 'uppercase' truth, and no pure 'objectivity' corresponding to some subjectivity. This new view of knowledge just fits the course of aviation maintenance management. Knowledge is no longer "absolutely correct" taught by teachers, but the product jointly constructed by teachers and students. Based on this, the maintenance and management course of aviation maintenance sergeant is to reconstruct management knowledge through discussion and communication between teachers and students, and realize the teaching goal of cultivating students' management consciousness and improving their management ability from the perspective of ability and quality.

3.2 Establish the Teaching Organization form of Three Dimensional Steps

Under the guidance of the new knowledge concept, the teaching objective focuses on the cultivation of students' knowledge and the improvement of their ability, and on this basis, the teaching organization form of "three dimensional steps" is established. The so-called "three steps", that is, the first step of classroom teaching, belongs to offline teaching, the second step to complete online self-study, including reading materials, complete discussion assignments and self-examination and self-testing; The third step is to carry out offline group discussion and communication with teachers and students (the whole class) on the basis of self-study, so as to jointly solve the common problems in the discussion homework. Its three-dimensional nature is reflected in the horizontal course of the course process, according to each teaching unit rolling forward, the final completion of the teaching task. In the vertical aspect of a single teaching link, according to the steps of "learning relevant materials -- completing the" discussion "homework -- participating in the stage assessment", expand the learning according to the content system learned offline, check the gaps and make up for the gaps, and make full preparations for the next offline dialogue between teachers and students. The whole teaching activity is a complete structure, rolling forward closed loop, in line with the students' learning law of "acquiring knowledge -- internalizing absorption -- improving ability".

Offline teaching is mainly in class. The teaching time is divided into different classes. All the syllabus class hours and the spare time between each class are divided into teaching time. The first class introduces the course, the second class, the spare time between this class and the next class, and the first class of the next class are three parts into a unit to complete the teaching of a topic (or chapter).

In a teaching unit, teachers use the second class to teach teaching content, students use online resources to complete homework and other self-study links after class, and the first class of the next class is used for group discussion and class communication. Among them, the principle of the teacher's teaching is to leave the blank, that is, do not need to speak too comprehensive, profound, thorough, wonderful, to use the limited time in the construction of the structure, focus on the key. Students' self-study includes independent self-study and group discussion. They divide what they have learned into three categories around discussion assignments and discuss what they have not mastered. The self-study part needs to make full use of spare time. Teachers need to upload relevant materials and periodical examination questions about the content of this class in advance. Students can finish the discussion homework and chapter examination on the basis of listening to the lecture and reading the materials, so as to prepare for the group discussion in the next class.

Online teaching and offline teaching synchronization, the emphasis can be placed on students' self-study. Teachers upload teaching resources according to the arrangement of each teaching unit, including audio and video materials, text materials, etc., to help students deepen their understanding; The self-test questions of each unit are set for periodic self-examination, which can help students to complete the discussion assignments and tests independently, as well as prepare for the group discussion and class communication of this unit.

On the whole, the teaching mode of "three-dimensional three steps" is to build a knowledge system with complete contents and prominent key and difficult points through offline listening and lecturing. Online self-study, including reading materials, completing homework, self-assessment, to obtain feedback information of teaching effect; Offline classroom discussion and communication, consolidate the understanding of the three steps to improve the ability, and finally achieve the teaching objectives.

3.3 Flexibly Adopt a Variety of Teaching Methods

Based on the concept of online hybrid teaching the offline half the time used for group discussion and communication of the class, and don't prepare as long as the review of the concept is put forward, both leave a lot of time to the full classroom interaction, and for students to set aside enough time for class discussion, provide favorable conditions for case teaching, discussion teaching. In aviation maintenance officer management courses, for example, case teaching is one of the most fit management courses teaching method, but influenced by the teaching time and

conditions, unable to carry out case teaching, innovation subject organization mode, online teaching stage release case for students to read and think to be analysed and offline discussions can discussion-based assignments discussion surrounding the case. In-depth discussion of teaching to the teachers and students thinking put forward higher requirements, but the limited class time cannot implementation issues in-depth study, application based on the concept of online hybrid teaching, students can use the online development resources and online communication with teachers, the deeper study on the problem, offline teaching and can share thinking results together with the whole class, Add depth to the discussion.

3.4 Reconstruction of Learning and Assessment Methods

Under the guidance of the concept of pair points, the way of course learning and assessment has also changed. One is the use of discussion assignments, which is a major feature of the bisection concept. In the past, students' homework is mostly excerpting or repeating homework, lack of necessary independent thinking, not only cannot play the role of reviewing old and learning new, but also easy to make students develop the habit of relying on teacher guidance. Discussion homework requires students to study by themselves, using the form of filling in to distinguish between mastered and unmastered content, which not only reduces the amount of unnecessary copying exercises, but also tests the knowledge of the situation.

Appraisal way pay attention to the practical operation demand, pay more attention to process evaluation, teachers don't have to set up the examination paper, arrange the test time and place, only need to study in the APP platform set up to examine the learning after the completion of each phase, the procedural, open the inspection on network, set up the test time, throughout the learning process, Realize the "low investment, full coverage" form of assessment.

Teachers set self-test questions according to the content and process of teaching units, and students can conduct self-test according to their own time arrangement. The self-test results are fair and open, and students can grasp the situation of learning each chapter at any time and check the gaps. The information summary function of the platform can be summarized and analyzed according to the students' self-test results, indicating the shortcomings and shortcomings for students, so that the discussion homework is targeted and scientific.

4. Summary

Through the application of the combination of online and offline teaching mode of "divided concept" in several classes, the "teacher as the leading, students as the main body" is truly implemented. To the teaching time is short, the teaching content is numerous and complicated, the teaching method form is single, the study enthusiasm is not high, the classroom atmosphere is dull and so on gives the effective countermeasure measure. The new teaching mode has been widely accepted and recognized by the students, and achieved remarkable results.

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