

# *Exploration and Practice of Mixed Teaching System Based on Engineering Financial Management Course*

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**Abstract:** In the background of the Internet + era, online teaching is widely used and carried out, but there are also some problems in the practical application. This paper analyzes the characteristics of online and offline teaching, based on application-oriented undergraduate teaching and specific courses as examples, to practice and explore the mixed online and offline teaching mode, so as to achieve better teaching results.

## 1. Introduction

With the development of information technology, it has become a reality to use intelligent terminals to access the Internet anytime and anywhere. In the field of education, this not only changes the way students acquire knowledge and information, but also changes their learning ideas and methods. It is the general trend to use modern information technology to carry out curriculum teaching reform.

Online hybrid teaching mode is based on the Internet environment of a new teaching mode, the teaching mode can better adapt to the current mobile learning, and can make better use of the characteristics of mobile intelligent terminal, realize the two-way interaction between teachers and students, to form a good mutual learning atmosphere between teachers and students, and promote students' learning enthusiasm, improve the teaching efficiency "Engineering Project Investment and Financing" course, combined with Liaoning Province quality online course resources, after two rounds of teaching, the above problems have achieved certain results and practical teaching experience<sup>[1]</sup>.

In the past few years, many courses in universities across the country have shifted their traditional offline teaching to mixed online and offline teaching. According to the feedback of students on the online and offline teaching mode of financial management in the past semester, most students think that the teaching mode is novel and diverse, and they also recognize the online teaching mode of financial management. First of all, the change of the teaching environment makes the teaching space more open and the materials more abundant. Second, the feedback of students' independent learning is clearer, and their participation in class discussion is more extensive. Third, students change from passive learning to active learning.

## 2. The generation of problems

University teaching is the core activity of university talent training, and improving the quality of teaching activities is the core of educational methods. The development of modern information technology has a great influence on the teaching reform of universities. Therefore, under the background of the implementation of application-oriented universities and vocational education at this stage, theoretical knowledge should be based on the training of applied technical talents, and attention should be paid to the functions of students' personalized needs, knowledge independent expression, practical ability expansion and other aspects. Therefore, this course explores and practices the online and offline mixed teaching innovation system and organizational mode of the core course of professional theory.

In the "teacher classroom teaching" and the single teaching mode in the previous two years, there are the teacher leading and dominating the whole teaching activities and the passive host and guest teaching mode of students, which has the following deficiencies in the implementation process:

- 1) Ignoring the differences and personalized needs of students.
- 2) Ignoring students' independent classroom activities.
- 3) The class teaching time is too long.
- 4) One-sided application of modern educational technology.

In the past study, although students quite recognize the mixed online and offline teaching mode of this course, the questionnaire also reflects that there are still some problems in some teaching modes. Students' pre-class preview work is not sufficient, students' review after class is weak. Some students just complete the homework assigned by the teacher, and lack the review of the knowledge points taught in class, which makes the students' grasp of relevant knowledge not solid enough. The research of the paper can not only optimize the online teaching mode of financial management course, but also provide experience for the optimization of online teaching mode of other courses.

## 3. Problem solving and practice

Online hybrid teaching mode refers to the support of modern information technology, teacher's online platform provides teaching video and knowledge PPT learning resources, students extracurricular autonomous learning of online resources, and in the classroom (offline) teachers to the students reflect the difficult content, answer students' doubts, prompting students to better master knowledge.

### 3.1 Teachers integrate online teaching resources, and students use online resources for pre-class preview

At the beginning of the course, teachers can ask students to register on the school course resource database platform, establish pre-learning of the corresponding courses, and use the online course platform to establish classes, to urge and ensure that every student can participate in learning and interaction. According to the teaching plan and teaching content, the teacher to learn the content, the focus and difficulty of learning told the students, the learning resources to the learning platform, requires students to preview to learn knowledge, and summarize the problems, make the students learn with problems, this can improve the learning initiative and enthusiasm at the same time, exercise its independent learning ability.

### **3.2 Students study independently online independently, and teachers supervise the online learning status**

In the teaching stage, the original class in accordance with the combination of online integration, online learning of each teaching module part, on the basis of the first step before class preview, the teacher will comb this module content, in the form of mind mapping to students, and indicate the difficulties and need to solve the problem, set the task point. Students are required to complete the following tasks within the specified time frame: first, Students need to watch videos, PPT and other digital materials, arrange time to study and study independently, and solve problems in videos and homework questions <sup>[2]</sup>. Second, for the problems that cannot be solved, students need to give feedback on the learning platform, so that teachers can reasonably arrange the content and methods of offline learning.

Teachers need to closely follow the student steps to do the following: first, supervise the completion of students' various task points through the platform, and urge students to closely follow the pace of teaching. Second, check the accuracy of the task point exercises, and grasp the depth of students' thinking about knowledge points in the discussion process. Provide personalized basis for the subsequent offline teaching structure and arrangement. Third, integrate students' knowledge mastery, summarize the key and difficult points, and sort out students' feedback. Common problems can be solved in offline teaching, and individual problems can be solved one to one through online.

### **3.3 Interactive offline teaching**

The goal of classroom activity design is to maximize the teaching effect to promote the mastery of knowledge. Classroom activities in the mixed online and offline mode can be conducted in the following two ways: Teaching of the basic knowledge of the course: According to the feedback of students' online learning, teachers will explain it intensively in class to guide students to master and understand. Teaching of the course application knowledge expansion part: First, teachers design some application problems closely related to the actual course content, group students, and cooperate within the group, so as to promote students to better master and use the knowledge learned in the course, and train students' knowledge transfer and innovation ability.

### **3.4 Students use online resources to consolidate the review, and teachers make an interactive summary**

Teachers should urge students to use online exercises, online tests and other resources for self-testing and review after class. Teachers can also push typical cases and representative exercises through the learning platform to test students' mastery and understanding of knowledge, and correct and strengthen them in time according to the test results. For knowledge points that are not clear during the class time, students can learn by repeatedly watching teaching PPT s and teaching videos, can use the network to communicate with teachers, or ask questions or initiate discussions on the learning platform or WeChat group. For students with weak learning ability, this form can provide free time for learning and improvement, thus helping students to understand and master what they have learned.

### **3.5 Teachers 'after-class teaching reflection and students' preparation stage display**

Statistical analysis of the data of learners' assessment and questionnaires to evaluate the teaching effect of the new model:

- 1) Test and evaluate students to evaluate the effect of mixed online and offline teaching.

2) Understand the students' satisfaction and views on the mixed online and offline teaching mode through the questionnaire<sup>[3]</sup>.

3) Reflection on the results and existing problems obtained in the implementation process of the online and offline hybrid teaching mode, and constantly improve and optimize the teaching scheme in the follow-up practice to further improve the effect of the follow-up teaching.

This course is a core professional basic course, which not only requires students to have a high theoretical knowledge, but also requires students to have a strong ability to combine theory and practice. Therefore, how to ensure the complete and systematic knowledge system of the course, so that students have a solid professional foundation, is the core content and teaching objectives of this course. In view of the shortcomings in the existing online and offline teaching mode, the course is also trying to be steps in the process of teaching. First, in the pre-class preparation stage, the teacher recorded the video and posted it on the teaching platform to urge the students to preview, and discuss and answer questions. In the teaching stage, the teachers should give full play to the leading position of the students, let the students better participate in the classroom interaction, and highlight the students' sense of participation. In the after-class learning stage, students are not only required to complete their homework, but also required to do a good summary and thinking of the course knowledge points.

#### **4. The innovation points in the process of practice**

Personalized setting of teaching content: it is necessary to be designed and produced by teachers familiar with the use of teaching modules, understanding students' characteristics and mastering industry knowledge, so that each course type, each professional course and each student can select teaching resources according to their own characteristics and feedback the teaching effect<sup>[4]</sup>.

Systematic teaching logic: online and offline mixed mode teaching, to connect online quality course resources, professional positioning, industry knowledge, student feedback, and curriculum effects, must form a coherent and effective logical range, to help students to understand knowledge and improve learning efficiency.

Primary and secondary interchangeability of offline teaching interaction: timely preview and rich teaching resources are the basis of theoretical learning. In the offline teaching process, students must participate in the whole process and maintain effective feedback timely. In this part, teachers can adopt certain theoretical summary, answering questions and asking questions. What is more effective and important, it is to give students full opportunity to show and feedback their summary, combing and application of knowledge, so that the "two-dimensional" solidified knowledge can truly become "three-dimensional" knowledge that can be practical and applied.

The cross-school cooperation of mixed teaching innovation system and organizational mode effectively promotes the common improvement of teachers and students. The sharing and cooperation of online teaching resources can promote the interdisciplinary integration of disciplines and promote the joint development of teaching resources. In the future, we will jointly develop high-quality teaching resources such as courses, cases and teaching materials to realize the sharing of high-quality teaching resources. At the same time, in the teaching process, carry out teacher exchange, promote teacher professional development, and deepen the innovation of exchange system.

#### **5. Conclusion**

As the guarantee of the online and offline teaching mode of this course, the construction and improvement of online course resources are strengthened, and high-quality online teaching resources are the foundation. In addition, we should also strengthen the construction and update of

question bank resources. In order to better let students master the key and difficult problems of the course and consolidate the teaching effect, teachers also need to strengthen the construction and update of question bank resources. Moreover, more attention should be paid to the students with poor previous learning effect.

In addition, regular teacher training is also crucial to better guarantee this new form of teaching methods. Schools need to regularly train teachers, so that teachers have the opportunity to discuss and learn from each other, and better master the skills of online teaching methods. In addition, the school can also invite experienced teachers to teach teachers how to conduct classroom design, how to be a good host in the student discussion session, how to investigate the students' learning effect and other specific design issues. Regular seminars can also be held for teachers to discuss and share their lessons, learn from each other and make continuous progress.

With the rapid development of higher education, more and more universities begin to pay attention to strengthening the alliance and cooperation with universities in other regions, and learn from each other.

Cross-school study and mutual credit recognition are a new teaching management mode that universities rely on the third-party teaching management platform, select the resource sharing courses of other universities according to the agreement between universities to study and obtain credits, and are recognized after the review of the university. This mode can improve the utilization rate of teaching resources in colleges and universities, and is an important measure to balance the shortage of teaching resources, reduce the cost of running schools and promote resource sharing. At the same time, it innovates the talent training mechanism, provides students with more and better-quality educational resources and more novel teaching methods and means, greatly enhances the autonomy and flexibility of students' learning, and thus promotes the reform of teaching mode in colleges and universities and improves the quality of talent training.

In the process of implementing this model, some problems are exposed due to the constraints of teaching methods and financial support. Among them, there are three prominent points: first, the course selection and the teaching video of the builder are not timely; second, the difference in the selection of teaching materials; third, the difference in the weight of assessment and identification.

In view of the above problems, both parties should actively communicate with each other, and the textbook should be as consistent as possible. In the process of this mode, can tilt in theoretical and principled strong course, about the selection of teaching materials and course assessment, the two sides should also actively communication, teaching materials should be consistent, early communication to avoid inconsistent situation, and the builder syllabus and teaching plans also try to follow the selected textbooks, convenient user students' learning. The final assessment should be student-centered, and the procedures should be simplified as far as possible on the basis of ensuring the fairness and justice of the examination, so that the assessment can truly reflect the true mastery level of both sides, especially the students of the user. Actively explore cross-school study and credit mutual recognition among different levels of education. Higher education should be more inclusive based on its characteristics of openness. When conditions are ripe, it can be considered to explore the cooperation with foreign universities to carry out international cross-school study and credit mutual recognition.

The cooperation and sharing between colleges and universities is an inevitable trend in the development of higher education, which breaks the regional limitations of traditional education and makes it possible to complement and share between colleges and universities. At the same time, it is also a university to adapt to the current information development process and bring more updating possibilities to students, which is a positive measure and breakthrough with students as the fundamental.

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