

Article

# Design and Empirical Research on Online and Offline Blended Teaching of Decoration Specialty in Higher Vocational Colleges under the Background of 'Internet + '

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**Abstract:** Taking the course of decoration specialty in higher vocational colleges as the starting point, this paper explores the online and offline mixed teaching mode in the background of 'Internet + '. Through the understanding of the current teaching situation of decoration specialty in higher vocational colleges, it is found that blended teaching is divided into four modes: teaching resources mixing, teaching environment, teaching methods, and evaluation methods. Through the in-depth study of the advantages, difficulties, teaching design, implementation methods, and significance of the blended teaching mode, it is found that under the background of 'Internet + ', the use of online and offline blended teaching mode can enable students of higher vocational decoration majors to master knowledge and cultivate their self-learning ability.

**Keywords:** education informatization; blended teaching; decoration major

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## 1. Introduction

Education is prosperous; strong education is strong. Building a powerful country in education is the basic project of the great rejuvenation of the Chinese nation. We must give priority to education, deepen educational reform, speed up educational modernization, and provide satisfactory education to the people. In 2018, the state issued the 'Education Informatization 2.0 Action Plan', which marks the further development of Chinese education in the direction of informatization. Therefore, higher vocational colleges actively carry out digital campus construction and create an 'Internet + ' education platform. Information technology is changing the teaching environment of higher vocational colleges, teachers' teaching methods, and students' learning methods at an alarming rate.

Since 2020, under the call of 'stopping class and not stopping school, higher vocational colleges have risen to the tide of 'online teaching'. As a result, many information applications have emerged. Teachers gradually adapt to and flexibly apply information teaching in daily teaching, and students gradually adapt to and master the rhythm of information teaching in daily learning, so that the information literacy of both teachers and students has been improved. Obviously, education informatization has become an important part of education reform. In information education, if there is no teacher's participation, students' learning effect will be greatly reduced; without the participation of students, the role of teachers cannot be reflected. Therefore, both teachers and students are beneficiaries and promoters of information education [1-4]. The decoration professional course is a comprehensive course that integrates technology and art. Higher vocational colleges should make full use of 'Internet + ' information technology, actively explore the mixed teaching method of effective combination of theory and practice, and make decoration professional courses become the template of mixed teaching methods for other courses, to promote education reform.

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## 2. The Present Situation of Blended Teaching of Decoration Specialty in Higher Vocational Colleges

The traditional teaching mode of the decoration major in higher vocational colleges is based on teaching materials and dominated by teachers' oral teaching. In the traditional teaching mode, teaching focuses on teaching rather than learning, resulting in some problems, such as: the teaching effect is not ideal, a single way of learning, limited sources of knowledge, learning efficiency is low, and ignoring the initiative and creativity of students. To solve these problems, we must carry out education reform and implement the blended teaching mode. The term blended teaching originated from the field of corporate training in the United States. It is a new teaching mode that integrates online teaching and offline classroom teaching based on MOOC or SPOC. Through blending, the online learning module and the offline teaching module can achieve complementary advantages and disadvantages [5].

### 2.1. Necessity of Blended Teaching Model

Under the background of 'Internet +', the use of online and offline hybrid teaching mode not only continues the advantages of traditional teaching mode, but also avoids the disadvantages of complete online teaching mode, so that the learning mode is diversified, the learning resources are enriched, the learning knowledge is vivid, the learning efficiency is greatly improved, and the learning effect is greatly enhanced. In order to achieve educational reform, the blended teaching mode has become an inevitable choice. This is also supported by the survey of teachers and students majoring in decoration (See Table 1).

**Table 1.** Attitude to blended teaching mode.

Evaluating indicator	Results (number of teachers/proportion)		
Teaching model suitable for the course	offline teaching mode 6/5.88%	online teaching mode 20/19.61%	online and offline blending teaching model 76/74.51%
Main reasons for adopting the blended teaching mode	better teaching results 54/52.94%	Lesson preparation is easier 12/11.76%	Students are more interested 36/35.30%
Will Blended Teaching Mode be Continued in the Future	firmly adopted 66/64.71%	See the situation 33/32.35%	prevent 3/2.94%
Evaluating indicator	Results (number of students/proportion)		
Love of teaching mode	offline teaching mode 145/30.27%	online teaching mode 133/27.77%	online and offline blending teaching model 201/41.96%
Necessity of blended teaching mode	necessary 365/76.2%	no need 51/10.65%	indifferent 63/13.15%
Popularity of blended teaching mode	rejection 31/6.47%	no exclusion, acceptable 369/77.04%	like 79/16.49%
The blended teaching mode can stimulate students' enthusiasm and initiative	yes 257/53.65%	indeterminacy 201/41.96%	no 21/4.38%

### 2.2. Present Situation of Blended Teaching Mode

Although the blended teaching mode has many advantages, the current development of the blended teaching mode is not smooth. For thousands of years, China has had a teacher-centered traditional teaching mode, where teachers instill knowledge in students, and students passively accept knowledge. Teachers and students need some time to understand and adapt to the new teaching mode. This is also supported by a survey of decoration teachers and students (See Table 2).

**Table 2.** Current situation of blended teaching mode.

Evaluating indicator	Results (number of teachers/proportion)		
Application of blended teaching mode in courses	offline teaching mode 23/22.55%	online teaching mode 76/74.51%	online and offline blending teaching model 3/2.94%
Evaluating indicator	Results (number of students/proportion)		
Understanding of blended teaching mode	offline teaching mode 83/17.33%	online teaching mode 323/67.43%	online and offline blending teaching model 73/15.24%

### 2.3. Difficulties in Carrying Out the Blended Teaching Mode

The transition from traditional teaching mode to blended teaching mode is not overnight, and there are still many difficulties (See Table 3).

**Table 3.** Difficulties in developing blended teaching mode.

Aporia	Results (number of teachers/proportion)
Teaching methods are not mature enough	36/35.29%
Teaching tools do not meet the requirements	24/23.53%
Insufficient teaching ability of teachers	48/47.06%
Insufficient incentive and restraint policies	52/50.98%
Insufficient autonomy of students	72/70.59%
Students lack extra-curricular learning time	32/31.37%
Difficult to Change Teaching Concept	78/76.47%
Worried about the teaching effect	63/61.76%
Other	0/0%

## 3. Thoughts on Blended Teaching Reform of Decorative Courses in Higher Vocational Colleges

### 3.1. Construction of Blended Teaching Mode

Blended teaching includes four modes: mixed teaching resources, mixed teaching environment, mixed teaching methods, and mixed evaluation methods [6].

#### 3.1.1. Mixed Teaching Resources

Teaching resources are the basic guarantee for carrying out blended teaching and the basic material for students to build their own knowledge and ability system, which is composed of online and offline resources [7]. Taking into account the students' different knowledge bases, different cognitive levels, uneven learning ability, and other factors, the teaching content should be from simple to complex, progressive layers, and strive to help each student have a comprehensive understanding of their own courses. Online and offline resources should be divided into two parts: in-class and after-class. Offline class resources are mainly textbooks used in the course. Through the analysis and interpretation of teachers' teaching materials, students have a general understanding of the working principle of the professional courses. Offline extracurricular resources are mainly teaching

materials, paper version materials issued by teachers, and students themselves adding to the library collection of information, which can help students expand their learning. Online classroom resources are mainly composed of PPT courseware, micro-lecture videos, cases, classroom homework, and classroom tests, which help students form a clear knowledge framework. Online and after-school resources are mainly the electronic learning materials issued by teachers, and the information obtained by students' self-network search, which can help students to think divergently. These teaching resources help students understand the history of the decoration specialty, understand and master the knowledge of the decoration specialty, treat the development of the decoration specialty dialectically, and cultivate students' self-learning and self-improvement ability.

### 3.1.2. Mixed Teaching Environment

The teaching environment in the blended teaching mode is not a single one, but composed of online and offline parts. In the traditional offline teaching mode, the classroom is the main learning place. In the blended teaching mode, the learning place can be a classroom, a library, a dormitory, a canteen, a playground, a laboratory, a bus, and so on. Students use fragmented time and online resources for autonomous learning in any space. The teaching environment is no longer limited; students can learn anytime and anywhere, greatly improving the efficiency of learning.

### 3.1.3. Mixed Teaching Methods

Teacher-centered teaching methods can no longer keep up with the pace of students' learning. When the teaching mode is not completely changed, students have learned to learn autonomously. The survey found that students with daily learning problems no longer rely solely on teachers to solve problems, but through the use of online resources learning, learning with classmates to solve the problem. The emergence of many ways to solve problems marks the gradual transition of traditional teaching methods to hybrid teaching methods. Students have conducted in-depth studies in the process of exploring problems, accelerating the absorption of knowledge, and cultivating their own creative thinking ability.

### 3.1.4. Mixed Evaluation Methods

The change of teaching mode has also created diversity in evaluation methods. The assessment of decoration professional courses is no longer based on the test results as the only measurement standard, but the process of curriculum learning is also included in the assessment standard. The use of online learning resources basically reflects the online learning process of the course, such as the viewing time of learning videos, the activity of online discussion, the completion of online homework and testing, and the quality of group work. The attendance rate of offline courses and the interaction with teachers and students in the classroom reflect the process of offline learning. This evaluation method is more objective and comprehensive. It considers the whole process of curriculum learning and the final learning results, affirms the learning process of students, stimulates students' sense of achievement and acquisition, and enhances students' confidence. Students have ideological collisions and emotional communication in mutual assistance, and they also teach students how to unite and cooperate.

In summary, the blended teaching mode is a more comprehensive and objective teaching mode, which helps students master the course knowledge, improve their ability of autonomous learning, and cultivate the corresponding professional quality.

## 3.2. *Blended Instructional Design*

### 3.2.1. Online Instructional Design

There are two principles of online teaching design: ensuring the quality of online courses and achieving the goal of online teaching. From the perspective of the quality of

online courses, first of all, it is necessary to meet the standards of professional education courses. Secondly, the online teaching content is abundant enough. Finally, students' participation and recognition are high. From the point of view of achieving the goal of online teaching, the content of online courses not only needs to meet the current needs of students majoring in decoration, but also has a positive impact on the subsequent school study and graduation employment. Through the investigation, it is found that students have their own preferences in online teaching activities and teaching forms (See Table 4).

**Table 4.** Online teaching activities and teaching form preferences survey.

Online teaching activities	Results (number of students/proportion)	Online teaching form	Results (number of students/proportion)
Video autonomous learning in a micro class	324/67.64%	Video recording	271/56.58%
Online test	247/51.57%	Micro-video	236/49.27%
Discussion area exchanges	290/60.54%	Animation	253/52.82%
Case analysis	259/54.07%	Live broadcast	203/42.38%
Explaining homework	209/43.63%	Situational drama	174/36.33%
Other	22/4.59%	PPT+Lecture	188/39.25%

### 3.2.2. Offline Instructional Design

The offline teaching design should first lead the students to start, and then strengthen the internalization of students' knowledge and improve their professional quality from the perspective of students' professional requirements, and finally closely follow the needs of future applications. Through the survey, it is found that students also have their own preferences in online teaching activities (See Table 5).

**Table 5.** Like investigation on offline teaching activities.

Offline teaching activities	Results (number of students/proportion)
Teachers' teaching	299/62.42%
Teachers answer questions	272/56.78%
Case discussion	256/53.44%
Research on group cooperation	225/46.97%

Blended teaching design should reasonably arrange online and offline teaching forms, teaching activities, and effectively allocate online and offline teaching time according to the characteristics of the course, class hour arrangement, teaching progress, teaching preferences, and other factors.

## 4. Implementation of Blended Teaching

### 4.1. Implementation of Online Teaching

#### 4.1.1. Selection of Online Platforms

With the development of information education, many information applications have emerged. Before teaching online, you need to choose a suitable online teaching platform. Through the investigation, the online teaching platform of blended teaching is found.

#### 4.1.2. Register and Log In, Enter the Online Class

After determining the online teaching platform, students register and log in using their real names as required, and join online classes to facilitate subsequent teaching tasks.

#### 4.1.3. Release Information

When all students enter online classes, teachers begin to upload learning resources before and after each offline course to help students learn independently. Through the investigation, it is found that there are many kinds of learning resources for students to prepare for the blended teaching mode (See Table 6).

**Table 6.** Learning resources under blended teaching mode.

Serial number	Project
1	Course syllabus, courseware, etc.
2	Micro video based on knowledge points
3	Classroom video in one lesson
4	Terminology explanation, key and difficult points analysis guidance
5	Exercise papers, etc.
6	Other

#### 4.1.4. Student Exchange Discussion

After students' autonomous learning, they can discuss real-time online questions or put forward their own views in the communication area in the class group or platform, and communicate with students of our school or other schools to help themselves solve problems.

#### 4.1.5. Teachers' Online Guidance and Question-Answering

Teachers on the online platform timely follow students' online questions and views, and do a good job of guiding and answering questions. The common problems put forward by students are solved in detail, and the problems that cannot be solved online are left to be solved offline.

#### 4.1.6. Online Work and Testing

In addition to daily online learning and communication, online homework and testing are also an important basis for assessing students' mastery of the course. After the completion of each stage of learning, online homework is released, and periodic tests can be carried out in the middle and late stages of learning to examine students' understanding of teaching content.

### 4.2. Implementation of Offline Teaching

#### 4.2.1. Course Introduction

At the beginning of the course, teachers should help all students reach the entrance level through basic knowledge teaching. Otherwise, subsequent autonomous learning cannot be carried out.

#### 4.2.2. Regular Offline Discussion

If students are not active in online teaching, they can understand the situation through offline communication and discussion, and grasp the ideological trends of all students. When the problem cannot be properly resolved online, you can also discuss it online.

## 5. Significance of Blended Teaching under the Background of 'Internet +'

### 5.1. Emphasizing Students' Principal Position

In the traditional teaching mode, teaching content, teaching progress, and teaching objectives are basically fixed,

which can only consider the learning situation of most students, and ignore the students with relatively strong or weak learning ability. This 'one size fits all' teaching model highlights the dominant position of teachers, focusing on 'teaching'. Under the blended teaching mode, the main role of teachers is to guide and assist. Students are no longer just passive recipients of knowledge, but active absorbers, focusing on 'learning'. Students can learn independently according to their own learning progress, their own learning level and ability, find out the deficiencies and make up for them, and be the masters of their own learning.

#### *5.2. Rich and Vivid Teaching Content*

In the non-informatized era, students relied on teachers' oral instruction to learn with teaching materials as the carrier.

About some working principles, internal structure, and other knowledge becomes obscure, students cannot absorb, and learning efficiency becomes very low. Nowadays, with the help of information technology education, teachers use PPT broadcasts, video explanations, animation displays, and other ways to make abstract knowledge vivid. Teachers make use of abundant online resources to make the key and difficult points in the teaching process easy to understand, and clarify the problems in a limited time, so that students can deeply understand what they have learned.

#### *5.3. Break through the Limitations of Time and Space*

In the traditional teaching mode, in addition to the class time in the classroom, students' own fragmented time is difficult

to apply, and students' learning resources are also limited. One of the biggest advantages of blended teaching mode is to break through the limitations of time and space. As long as there is a mobile phone or other electronic products, students can use fragmented time and learning resources in any space to help themselves learn.

#### *5.4. Cultivate Students' Creativity*

In the blended teaching mode, students rely more on their own autonomous learning and solve problems themselves.

Students have a deep understanding of knowledge in autonomous learning, and gradually improve their logical ability by screening and absorbing various online learning resources. After having a systematic understanding of professional knowledge, they will produce their own opinions when encountering practical problems, and then learn to find and solve problems, and finally cultivate students' creativity.

#### *5.5. Reducing Teaching Pressure*

Both students and teachers are beneficiaries of the mixed teaching mode. Students' self-learning ability is improved, and teachers' teaching pressure is reduced. In the limited classroom teaching time, teachers' teaching content is limited. If some knowledge points are not clear, it will affect the next teaching progress. Teachers use information education means for teaching, not only reducing the pressure of preparing lessons, but also making it easier to absorb knowledge.

### **6. Conclusion**

The "online teaching" model generated under information education has many advantages, such as flexible learning methods, freedom from the limitations of time and space, and abundant resources. However, it also has several disadvantages, such as the lack of a strong learning atmosphere in offline classrooms, weakening teacher supervision, increasing the pressure on parents, and affecting students' eyesight, among other shortcomings. In the context of "Internet + ", the adoption of an online and offline blended teaching mode can enable students majoring in decoration in higher vocational colleges

to master knowledge more deeply and cultivate their self-learning ability. Teachers in higher vocational colleges should actively embrace information-based teaching methods, adjust instructional models, promote educational reform, and focus on cultivating applied skilled talents to meet the evolving demands of society and industry.

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