

# Exploration of Information-Based Teaching Reform of Art Design Courses Taking "Creative Thinking" Course as an Example

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## ABSTRACT

**This subject takes the "Creative Thinking" course as an example to study the current situation and practical results of the application of information-based teaching methods in art design courses. Combining the characteristics of the "Creative Thinking" course, it explores how to use information-based teaching methods to optimize the teaching model. It is guided by the application theory of informatization-based teaching, looking for optimized methods and approaches from the five links of the teaching mode, exploring the application strategies of informatization-based teaching methods, analyzing the integrated way of teaching information resources of "Creative Thinking" course under the information-based teaching mode, and promoting the diversified development of teaching methods of art design course.**

*Keywords: information-based teaching, creative thinking, teaching platform*

## I. INTRODUCTION

With the development of information technology, it has become a trend to apply information technology to teaching to improve teaching and learning efficiency and improve teaching and learning effects. The realization of information-based teaching with the help of diverse information technology has become an integral part of the teaching process. Informatization-based teaching has changed the singular teaching mode to a certain extent, and has enriched the teaching forms mainly based on multimedia classrooms and classroom teaching. In order to cultivate art and design talents with excellent technology and innovative ability, each college has formulated a series of educational measures to train students' innovative ability in a targeted manner. Art design, as a professional closely connected with the application of cutting-edge science and technology, is more sensitive to the advancement of science and technology, fashion and other factors, and pays special attention to the cultivation of students' innovative ability. The teaching content of art design

should be unified with the development of the times, especially in the application of method technology. This requires teachers' teaching methods and models to be integrated with the application of advanced technologies and teachers to use this as a basis to study how to use information-based teaching methods to cultivate students' creative thinking ability in art design courses.

## II. "CREATIVE THINKING" COURSE OVERVIEW

"Creative Thinking" is an important course for undergraduates majoring in art and design. It aims to encourage students to face problems and difficulties without being restricted by routines, and to think and explore problems from different angles to develop the ability to solve problems and break through difficulties. The course uses open questioning skills and flexible teaching methods to stimulate students' creative potential, assist students to develop their potential and apply their imagination to break through the thinking space and cultivate the habit of innovative thinking and the spirit of innovation. Creative thinking teaching not only attaches importance to providing opportunities for thinking, but also emphasizes on providing creative thinking training with inspiring effect, using brains and taking action. It emphasizes uniqueness and novelty. At the same time, creative thinking teaching, as a thinking method and training model, needs to be integrated into

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various design courses to achieve complementary effects.

### **III. THE APPLICATION STRATEGY OF "CREATIVE THINKING" INFORMATIZATION-BASED TEACHING**

#### *A. Integrating high-quality teaching information resources on the information-based teaching system and increasing partner courses*

Because information technology is widely used in the classroom, the biggest role of information technology is that college students have the possibility of independent learning. Students can acquire and receive knowledge, and students can choose to receive information freely. The "Creative Thinking" course is introduced into the blue ink cloud teaching platform, and is introduced into the classroom teaching activities by means of projection screen, providing teachers and students with a different teaching mode and learning mode, so that the place for students to learn and practice can change. At the same time, the informatization method of the blue ink cloud teaching platform has changed the way of interaction between teachers and students and students. Students can realize online communication and answer questions in real time, which can improve the autonomy of students' learning. The students can choose their own learning methods, improve their efficiency and make full use of fragmented time to learn.

On the other hand, it's necessary to use information-based teaching platform to integrate high-quality teaching resources. The "Creative Thinking" course introduces the "Productive Thinking" cloud teaching material in the teaching resources and the national excellent online open course "Everyone Loves Design" of China's MOOC. Cloud textbooks integrate cutting-edge technologies in the three major areas of mobile learning, rich media digital publishing and cloud services. According to the learner's situational, dynamic, and visual learning needs, they re-construct the traditional paper teaching materials in rich media layout design and interactive design, and present a brand new design presentation for tablet computers (compatible with PC and laptop computers) to provide students with rich, extensible, interactive, trackable and refined learning experience of new textbooks. Cloud teaching materials fully arouse students' enthusiasm for reading, can make up for the deficiencies in ordinary teaching materials, and increase the interaction between teaching materials and students.

#### *B. Reshaping the teaching content and introducing curriculum content reflecting the cutting edge and the times*

In terms of teaching content, the "Creative Thinking" course needs to use open questioning skills and flexible teaching methods to stimulate students' creative potential, assist students to realize their potential and apply their imagination to break through the thinking space, and cultivate their habit of innovative thinking and the spirit of innovation. The cultivation of this open ability requires students to master cutting-edge and contemporary curriculum content. It is necessary to reshape the teaching content and increase advanced professional technology that students need to master. Teachers need to adopt new methods and new technologies to reflect the characteristics of information-based teaching.

#### *C. Forming a rich and diverse intelligent characteristic in the teaching concept*

The teaching concept of the "Creative Thinking" course needs to break the boundaries between the product design major and other art design majors, which is conducive to the multi-dimensional and comprehensive expression of the "Creative Thinking" course. In addition, in the teaching practice of creative thinking, it is necessary to expand students' new concepts of design, and at the same time, it is necessary to give students more awareness of independent exploration, and apply new teaching content and teaching methods of new creative thinking in thinking training. In this way, diversified teaching concepts can be formed, and the advantages of information-based teaching can be fully utilized.

### **IV. INNOVATIVE APPLICATION OF INFORMATION-BASED TEACHING IN THE COURSE OF "CREATIVE THINKING"**

#### *A. Innovation of teaching concept*

It's necessary to adhere to the concept of student-centered, output-oriented and continuous improvement, break the boundaries between design majors, cultivate students to effectively use creative thinking methods to understand design cases, and try to use the thinking methods learned to solve new problems and develop their creative thinking skills. At the same time, it is necessary to clarify the course positioning when the teaching concept is innovated. The positioning of the "Creative Thinking" course is to train students' innovative ability. It is necessary to excavate the depth of the course content, reflect the high-level application, and innovate teaching organization methods and means.

### *B. Teaching model innovation*

It's needed to keep students busy through the innovation of the teaching model, and use the flipped classroom and the development of the internalized innovative teaching organization model to carry out the five teaching links of classroom teacher guidance, student study, classroom inspection, elaborate teaching promotion and doubt resolving. Before the class, during the class, and after the class, the teaching method of problem-based learning (PBL), case-based learning (CBL) and team-based learning (TBL) can be respectively used for teaching.

Students can learn online before class, using resource learning mode for online learning. During the pre-class guidance, by learning video teaching resources through students' online materials, students can complete tests and homework, and teachers answer questions online. Offline teaching can use the blue ink cloud teaching platform to push resources and preview questions, clarify the classroom learning goals, and complete the preview. The pre-class teaching resources only need to push the design case with strong creativity.

During the class: A PBL model can be used for pre-lesson guidance, and the key points and difficulties in teaching can be elaborated. Teachers can use CBL mode to explain relevant theoretical knowledge points and carry out flipped classroom teaching. According to the situation of students' online learning, teachers can timely adjust the teaching content to answer the questions and teach briefly and succinctly, so as to improve students' ability to use the knowledge they have learned to solve problems. For example, when learning the brainstorming method of stimulating creative thinking in the 4th chapter, teachers will use CBL mode to allow students to master the brainstorming skills and principles, as well as precautions. In the internship and practical training part of the course, teachers will let students expand creative thinking in the form of group brainstorming.

After class: A TBL model can be used to complete discussions and assignments. The ratio of class hours to after-school hours is 1:2 to keep students busy. Teachers assign homework, introduce project training, let outstanding senior students serve as online platform assistants, form learning teams, and increase the intensity of extracurricular learning.

### *C. Innovation of teaching methods*

The teaching method is divided into two parts: one part is online learning; the other part is offline learning, discussing the problems in online learning, and focusing on the key teaching points and difficulties in the course. Teachers can adopt a mixed online and offline teaching mode, which can make full use of the advantages of online and offline teaching platforms, learn from each other's strengths, incorporate excellent

online informational curriculum resources into the teaching content, and organically integrate online and offline courses content while ensuring continuous updating of teaching content.

Online teaching resources can introduce Chinese MOOC SPOC and cloud teaching materials, and offline teaching adopts smart classroom and blue ink cloud information teaching platform. Under the network environment, the blue ink cloud class platform is a mobile teaching software that can carry out teaching as long as it has mobile smart devices. Using the Internet, the platform breaks the boundaries between inside and outside the classroom, and not only introduces mobile technology into the classroom, but also extends outside the classroom, promoting resource sharing and interactive communication between teachers and students, students and students. Teachers can carry out a variety of teaching activities on the platform, making the integration of online learning and traditional classroom teaching more efficient. Teachers can build the "Creative Thinking" course in the cloud and release resources in advance (see "Fig. 1"). It can provide services such as classroom management, resource publishing, activity addition, student grading, etc., and provide students with course subscriptions, message reminders, personalized learning resources, participation in activities, discussion and communication and other services (see "Fig. 2").



Fig. 1. Pre-class teaching resource release.

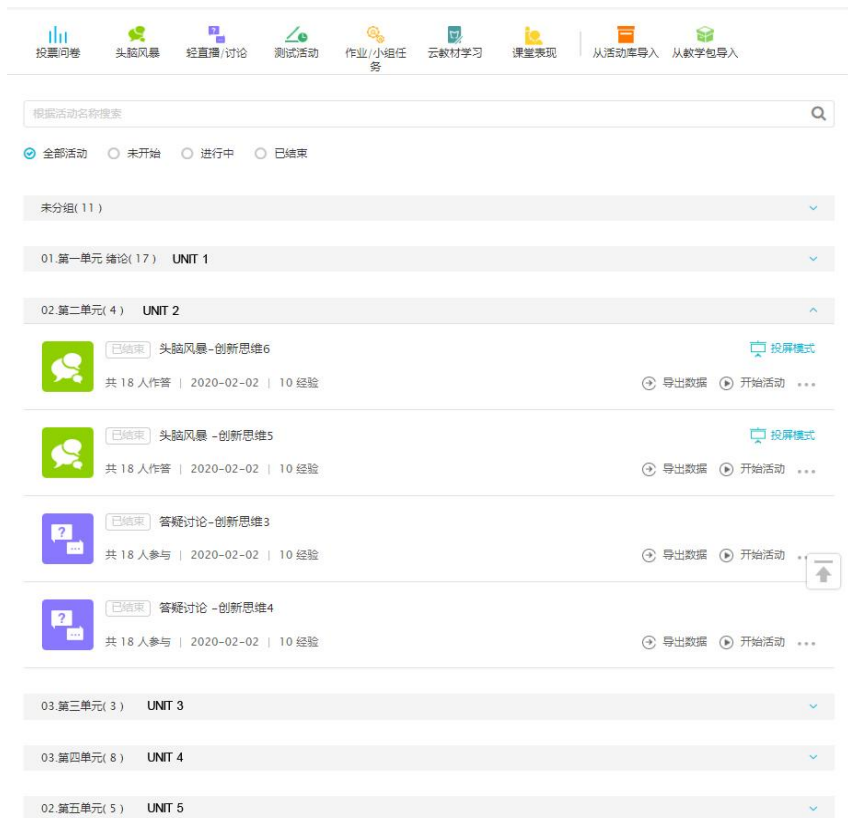


Fig. 2. Classroom activities.

*D. Innovation of evaluation and examination*

Teaching evaluation: It includes a diversified performance evaluation system, and establishes a

scientific and diversified evaluation and examination system, which is composed of online, offline, students peer assessment, group evaluation, and teacher evaluation. It realizes multi-angle supervision and

management of students' entire learning process. Online grades use the course management and evaluation of the cloud class. The online representation of students can be presented in a graphical way, which makes the online courses more measurable. (As shown in "Table I") It can accurately reflect students' participation in activities, viewing resources, learning cloud textbook, getting a like, classroom performance and video learning, and present it in the form of table data. (As shown in "Fig. 3" and "Fig. 4")

TABLE I. THE COURSE IS COMPOSED OF EVALUATION AND EXAMINATION

Usual performance 60%		Test score 40%
Online 40%	Offline 60%	
Online discussion 15%	Class performance 20%	
Unit work 45%	Class discussion 20%	
Exams 40%	After-class homework 20%	
	In-class training 30%	

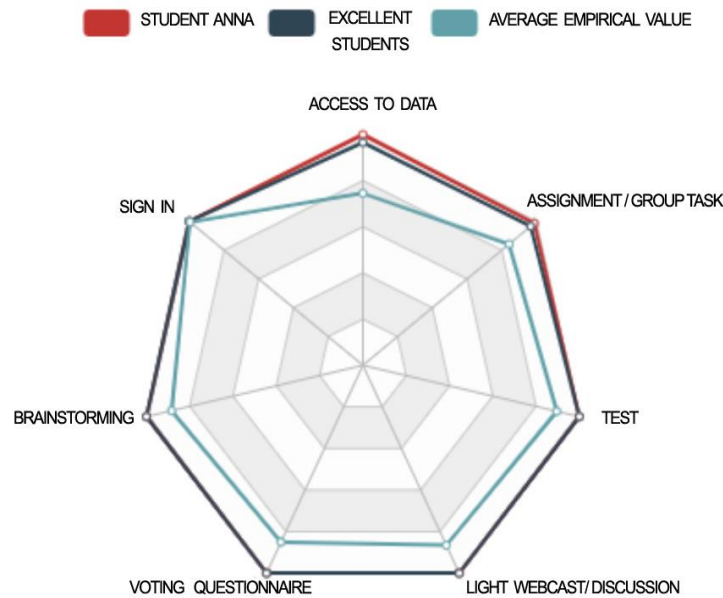


Fig. 3. Students' personal online learning information feedback.



Fig. 4. Students groups' online learning information feedback.

### *E. Innovation of teaching effect evaluation*

With the introduction of a third-party Max teaching quality management platform, online and offline or suitable courses have stimulated students' enthusiasm for learning in teaching practice and achieved good reform results.

## **V. THE SIGNIFICANCE OF INFORMATIZATION-BASED TEACHING REFORM OF "CREATIVE THINKING" COURSE**

The attempt to reform the information-based teaching of the "Creative Thinking" course has made up for the lack of application of its curriculum information-based teaching, widened the application depth and breadth of information-based teaching, and promoted the development of information-based teaching. The "Creative Thinking" course informatization attempt can fully release the advantages of the informatization-based teaching mode, and promote the innovation and development of teaching reform. At the same time, it can promote the rapid and sustainable creative development of the informatization-based teaching mode of art design courses, and provide theoretical support for the development of the informatization-based teaching mode.

In practice and application, the use of information-based teaching methods can effectively save teaching and training resources, and more closely link art theory with operation; the content of traditional multimedia teaching can't show the multi-thinking of the art teaching content and effectively transform into the ability of art innovation.

In terms of teaching methods, it changes the traditional classroom-centered teaching method, effectively realizes the combination of curriculum theory and practice, can effectively convert abstract teaching content into intuitive feelings, and provides richer and more effective measures for creating situational teaching.

In the course teaching plan, the combination of information-based teaching and the "Creative Thinking" course can broaden the means of expression of the teaching model; for classroom physical teaching, it can enrich the types of teaching media and clearly show the particularity of the art discipline, which can greatly enhance students' interest in learning and enthusiasm for active learning, thereby greatly improving the effectiveness and quality of teaching.

## **VI. CONCLUSION**

Nowadays, with widely using of informatization-based teaching, there are many kinds of informatization teaching methods; the development of technology

diversification from multimedia technology to virtual reality technology, network technology and AI technology also inevitably leads to the blind use of information-based teaching methods. Combined with the characteristics of the art design course, this article initially explores how to use information-based teaching methods to optimize the teaching effectiveness of the "Creative Thinking" course, and analyzes the innovative application strategies of information-based teaching methods. It aims to provide reference significance for the use of informatization-based teaching methods in art design courses, while avoiding the blind use of informatization teaching phenomena and promoting the development of teaching methods based on effectiveness.

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