



# Research on the Application of “Flipped Classroom” in Art Design Major Under the New Media Environment Taking the Course “Design Composition” as an Example

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**Abstract.** In recent years, flipped classroom teaching has set off a wave of education reform at home and abroad, providing new ideas for the development of teaching and learning. This research, with the aid of Chao Xing online learning platform, applies the flipped classroom teaching method to the teaching practice of Design Composition. To construct a learning behavior path of pre-class learning, in-class design practice, after-class reflection and re-learning, it promotes students’ deeper understanding of knowledge, stimulate their interest in learning, and improve their autonomous learning ability. The results show that the teaching effect is far superior to that of the traditional classroom in the teaching of Chinese art design major.

**Keywords:** Flipped Classroom · Design Composition · Art Design · Higher Education · New Media

## 1 Introduction

The development and popularization of the Internet, especially the mobile Internet technology has given birth to the “flipped classroom” teaching mode. In 2007, Jonathan Bergmann, Aaron Sams and Salman Khan, three teachers at Woodland Park High School in Colorado, proposed a “flipped classroom” style of teaching. In the flipped classroom, knowledge imparting is completed after class with the assistance of information technology, while knowledge internalization is completed in class with the help of teachers and classmates, so as to realize the flipped classroom.

Flipped classroom overlaps with other methods of learning, including blended learning, inquiry-based learning and other teaching methods and tools in terms of meaning, all of which aim to make learning more flexible and active, and to make students more engaged. “Flipped classroom” is a thorough subversion of the traditional classroom teaching structure and teaching process based on paper textbooks. It will lead to a series of changes in the role of teachers, course mode, teaching scene, management mode and so on. Especially with the support of new media technology, nowadays most courses at

home and abroad are carrying out the practice of flipped classroom “according to the appropriate course”. Under this background, this study, mainly taking the courses of art design as the “flipped object”, exploring the flipped effect from the aspects of teaching design and teacher-student two-way evaluation.

## 2 A Review of Research on Flipped Classroom

The keyword “flipped classroom” was searched in CNKI database (the retrieval date was March 15, 2021), and there were 60,628 papers regarding flipped classroom.

One part is about the theoretical research of flipped classroom. For example, “Flipped Classroom and Its Effective Implementation Strategy” [5] and “Flipped Classroom Application Practice and Reflection in China” [4] were published in the Journal of Electronic Education in 2013 and 2015 respectively. The former puts forward that flipped classroom should attach importance to the role of teachers. It needs the support from information technology, which may cause the change of teaching evaluation and promote the sharing and integration of high-quality teaching resources. The latter is to reflect on the current situation of domestic practice: the application of micro lesson in flipped classroom, the quality of “learning first” of students before class, the cultivation of advanced thinking ability of students in class, and the reserve of professional quality of teachers have all become problems faced in practice.

The other part is about the flip in various professional research and application of the class. Such as “Application of ‘Flipped Classroom’ in College Teaching——A Case Study of Educational Technology Specialized English Course” [2], “Research on the Application of Flipped Classroom Based on Micro-video Resources in Experimental Teaching – Taking ‘Modern Educational Technology’ Experimental Course as an Example” [3], “Practical Research on Flipped Classroom Teaching Mode Based on Micro-lesson——Taking ‘Basics of Computer Application’ as an Example” [1] and other research. They have explored the possibility of applying flipped classroom to language and engineering majors, but few studies on art and design majors has been conducted so far.

## 3 The Application Practice of Flipped Classroom in the Course of Design Composition

### 3.1 Course Introduction and Learning Objectives

Design composition, including plane, color and three-dimension, is an important part of the foundation of modern art design, and is also the basic modeling design course for art design majors in Chinese colleges and universities. Planar composition is a science that studies the change and composition of images in two-dimensional space, and explores the visual law of two-dimensional space and the composition law of various elements. Color composition is a kind of thinking set based on people’s long-term feeling of color. Different color collocation can offer people different psychological feelings, and color composition is to summarize these thinking set, so as to help artists and designers improve the color aesthetics of their works. The object of three-dimensional construction is the creation law of three-dimensional form and spatial form. Specifically, it is the physical law of three-dimensional modeling and the psychological law of perceptual form.

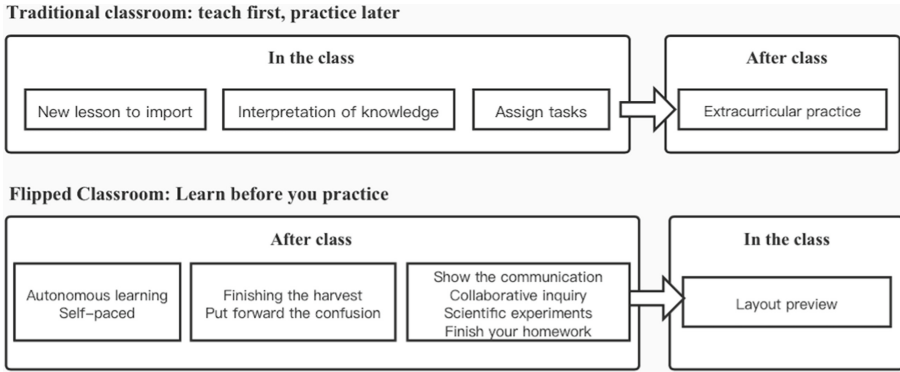


Fig. 1. The process of classes

### 3.2 Flipped Classroom Design Path

The traditional class still takes teaching in class first and then exercises after class, while the flipped class takes learning after class first and then exercises in class, as shown in Fig. 1.

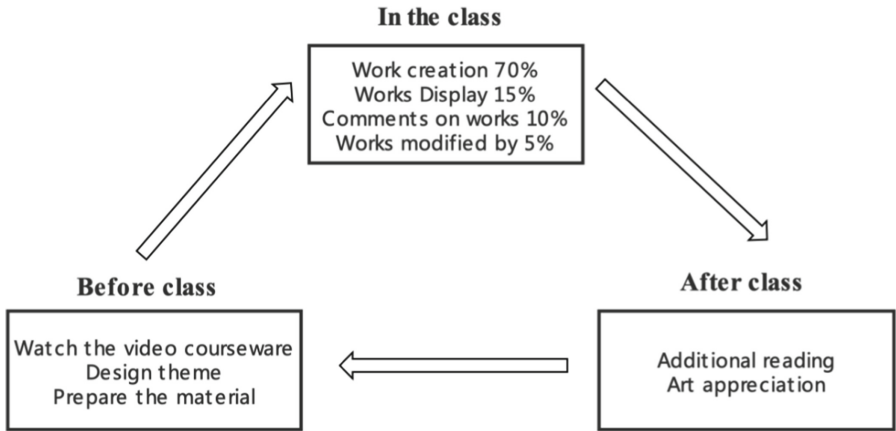
The course “Design Composition” is conducted once a week with four periods each time. There are few theoretical lectures in the teaching plan, and most of the class time is used for students to create based on the knowledge points of a certain chapter. If the theory is taught in class, students will have no time to prepare materials for the creation, and it will take a lot of time to design and collect information.

Apart from mastering plane composition, color composition, three-dimensional construction of basic theories, basic knowledge and plane, the color performance ability, the basic form of plane figure and space perception and creativity, this course can also improve practical operation ability and design ability, space imagination ability and aesthetic and generalization ability, laying the foundation for subsequent courses.

Flipped classroom can just solve these problems. This course adopts the flipped classroom teaching method and redesigns the class mode and process as Table 1. Students learn the theory part in advance through the video courseware, create ideas and prepare materials after class. In class, they create works and show them to all. Meanwhile, teachers can comment on the works in time. Throughout this process, the roles and tasks of teachers and students have changed, it is shown in Fig. 2.

### 3.3 Diversification and Two-Way Evaluation

The teacher comments on the students’ work presentation in each class. In this process, the teacher praised the shining points of the works of art, which can greatly enhance the students’ self-confidence. Besides, shortcomings will also be pointed out, which is also beneficial to students. At the end of the class of “ , a set of survey questionnaires was designed for the teaching situation of this semester, including the following questions and Some of the findings are listed in Fig. 3 and Fig. 4 :



**Fig. 2.** Flipped classroom structure

**Table 1.** The contrast between flipped classroom and traditional classroom

	Traditional classroom	Flipped classroom
Teacher	Knowledge impartator and classroom manager	A learning instructor or facilitator
Student	Passive receiver	Active researcher
Teaching form	Lecture + Homework	Pre-class study + classroom research
Class content	Knowledge about	Studies
Technology application	Content show	Self-learning, communication and reflection, collaborative discussion tools
Evaluation way	Traditional paper tests	Multi-angle, multi-way

How satisfied are you with this course?

How satisfied are you with the usual classroom atmosphere?

How satisfied are you with the theoretical knowledge in the online course?

How satisfied are you with your work?

How long will it take you to finish your homework after class?

What did you get out of this course?(Sense of design, imagination, creativity, hands-on ability, sense of achievement, other skills)

Do you agree with this “flipped classroom” teaching method?

Do you think flipped classrooms are better than traditional classrooms?

What do you think the course needs to be improved on?

A total of 63 students filled in the questionnaire, and these results are shown in the data behind the questions. According to students’ works, the overall teaching effect

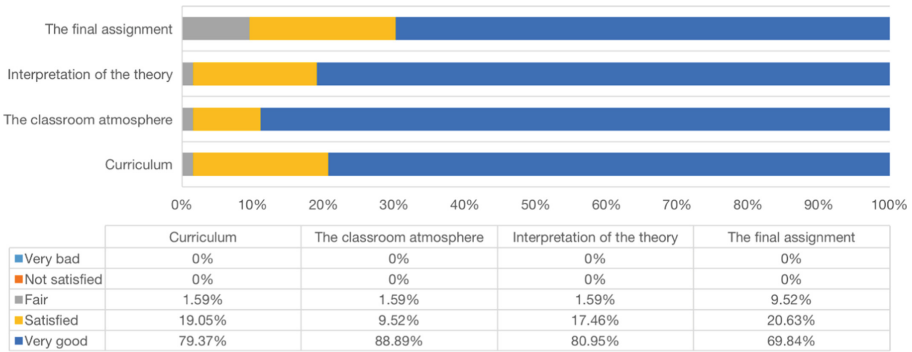


Fig. 3. Analysis of questionnaire results

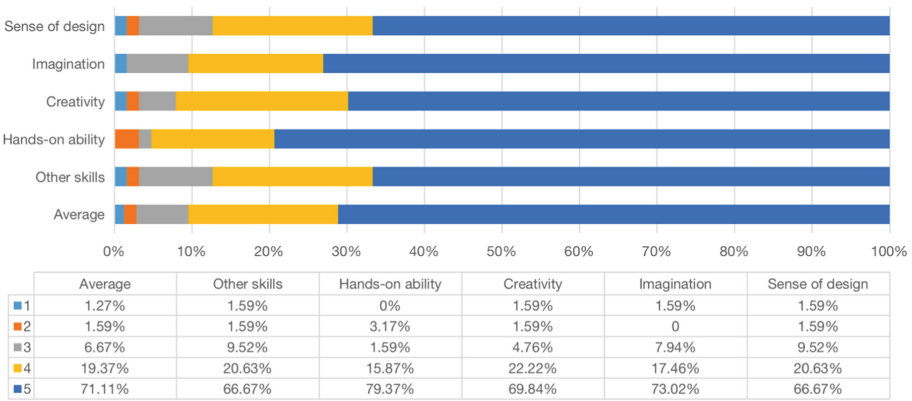


Fig. 4. Analysis of questionnaire results

of Design Composition after flipped classroom is better than that of traditional Design Composition course.

It can be seen that the “flipped classroom” teaching mode conforms to the concept of modern education reform, is an important means to promote students’ independent learning, and is conducive to the improvement of students’ comprehensive quality and ability.

Flipped classroom is a brand new experience for both students and teachers. In the current trend of educational information, flipped classroom can effectively provide a relatively loose and free learning space for the educated.

### 4 Conclusion

In the information age, autonomous learning, collaborative learning, personalized learning and technology-assisted learning have gradually become the main learning methods of contemporary students. Flipped classroom is a student-centered teaching mode. It is

applied to the course practice of art and design major, creating a more humanized learning method. Flipped classroom cultivates students’ ability of independent learning, and changes the whole teaching environment. In order to lay a foundation for self-sustainable development, learning is not to master the commonly known conclusive knowledge, but to enable students to experience the meaning of life and achieve self-transcendence through interaction.

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