

# Exploration of teaching reform and innovation in the "Three Constitutions" course of environmental art and design in higher vocational education

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**Abstract:** The "Three Constitutions" are the fundamental courses of art and design majors. In the context of rapid development in today's era, the traditional teaching of the three major components needs to keep up with the times. This article first analyzes the current teaching situation of the "Three Constitutions" course in vocational colleges, and then designs a teaching reform for the "Three Constitutions" course in the field of environmental art and design. It proposes innovative teaching measures for the implementation of the course, aiming to better adapt to the training objectives and teaching needs of the environmental art and design major in vocational colleges, and to fully utilize its value in professional design.

**Key words:** "Three Constitutions"; environmental art and design; mixed teaching, teaching innovation; AI technology

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## 1 Introduction

The "Three Constitutions" course consists of three parts: plane composition, color constitution and three-dimensional constitutes, which is a basic required course for art and design majors. This course is very important for the cultivation of aesthetic literacy and innovation of students majoring in art and design. But in today's rapid development of education and science and technology, "Three Constitutions" course of traditional teaching content and teaching methods showed a lot of problems, which has been unable to meet the development of art design education, so there is a need for course teaching reform to adapt to the higher vocational environment art design talents training target and teaching needs.

## 2 Current status of the "Three Constitutions" course in art and design

In today's rapidly evolving world, the foundational "Three Constitutions" courses in the field of art and design face various challenges, both in terms of their content and teaching methods. These challenges are primarily manifested in the following aspects:

### 2.1 Lack of systematic course structure

The "Three Constitutions" curriculum comprises three parts: plane composition, color constitution and three-dimensional constitutes. In the traditional curriculum framework of art and design, these three components are often taught

as separate courses with little or no connection between them. The teaching objectives and instructional designs of these three courses are often disjointed. Additionally, different instructors may teach these courses, resulting in a lack of communication between them. Furthermore, there is often insufficient understanding and alignment of the integration and progression of knowledge across these three constituent courses, resulting in their isolation without a clear logical structure.

## 2.2 Lack of alignment with specializations

Each specialization within the field of art and design has its unique educational goals, specific characteristics, and attributes. Even if a course is the same, the content may vary significantly based on the specific specialization. Currently, many vocational colleges and institutions offer a standardized "Three Constitutions" course that does not take into account the differences among the various art and design specializations. This approach tends to generalize the content of the courses and makes it difficult for students to understand the specific role of the "Three Constitutions" within their respective fields. Vocational college students typically have limited time for specialized studies, and if the "Three Constitutions" course does not align effectively with the students' specializations, it may hinder their ability to comprehend the significance and value of constituents in environmental art and design [1].

## 2.3 Limited application of traditional classroom teaching methods

The teaching methods for "Three Constitutions" course have traditionally been quite monotonous, primarily relying on teacher-centered lectures where students passively listen. This unvaried and rigid teaching format results in a lack of student engagement and gradually diminishes their interest in learning. Moreover, the lack of innovation in course content and the absence of effective motivation mechanisms further hinder students from unleashing their creativity, resulting in sub-optimal course outcomes.

In conclusion, the current state of "Three Constitutions" curriculum in art and design presents several challenges, particularly in a rapidly changing era. Reforms are urgently needed in vocational colleges and institutions offering environmental art and design programs to address these issues.

# **3 Curriculum reform design for the "Three Constitutions"**

## 3.1 Integration of curriculum content

Traditional "Three Constituents" courses often include plane composition, color constituent, and three-dimensional constitutes, lacking a systematic approach that can serve subsequent specialized courses. In our environmental art program, these three constituents have been integrated, allowing them to complement each other while maintaining individuality. This approach aligns with students' learning progress and conforms to the objective laws of reality. The integration of the three courses reduces the total instructional hours while enabling students to systematically comprehend the knowledge related to constituents [2]. This, in turn, equips them to objectively analyze and address real-world issues in their professional practices.

## 3.2 Course scheduling

The "Three Constitutions" is a compulsory course for environmental art and design, which is often scheduled in the first semester as per the educational plan. However, during the first semester, students usually lack a fundamental understanding of their major, and they have not yet been introduced to the common software tools used in environmental art and design, therefore, it limits their ability to apply digital simulation and construction techniques to the content of the "Three Constituents" through software applications and hinders the incorporation of computer technology into teaching. To address this issue, it is recommended to reschedule "Three Constitutions" to the second semester of the first year. By that time, students will have gained some understanding of their major and acquired basic software skills. This sequencing will make it easier for students to grasp the essence of constituents and their specific applications in professional design.

### 3.3 Curriculum reform highlighting professional characteristics

The "Three Constitutions" form the fundamental aesthetic logic of the environmental art and design program, making them highly significant. Currently, most vocational colleges' "Three Constitutions" courses do not effectively align with subsequent specialized courses, resulting in a disconnect between the generalized teaching content and the specific needs of the profession. Students often struggle to understand and master the intrinsic essence of the "Three Constitutions", which affects their performance and improvement in professional design. In the environmental art and design program, it is crucial to explore personalized teaching content based on the program's talent positioning and educational goals, while still adhering to the common foundations of the major. To achieve this, we have experimented with integrating practical cases and content that directly align with environmental art and design, allowing students to experience the importance and practicality of constituents during their studies. For example, in the plane composition module, we incorporate specific tasks related to floor tile layout methods in interior design to emphasize the application of constituents in the field of environmental art and design. In the color constitution module, we include case studies on color coordination in interior design. In the three-dimensional constitutes module, we explain the real-life applications of the elements of points, lines, surfaces, and volumes in spatial design. By improving the integration of "Three Constitutions" with the profession, students' concentration, enthusiasm, and learning motivation have increased, leading to enhanced teaching effectiveness [3].

### 3.4 Blended teaching combining online and offline methods

In our environmental art and design program, we have implemented a blended teaching model that combines online and offline methods for "Three Constituents" courses. Through the smart vocational education cloud platform, we have used platform resource libraries and our custom course materials to create a student-centered private online course tailored to our program's students. The online teaching resources and explanatory videos allow students to engage in self-paced learning before the class, addressing the issue of content overload in "Three Constitutions" due to limited class hours. In offline activities, we have the flexibility to conduct diverse and interactive teaching activities for each class, including questions, classroom discussions, case analyses, project-based learning, and assignments. After class, students have ample opportunities to explore constituents independently, and in-class presentations of assignments help ignite their enthusiasm and creativity. Moreover, a well-designed motivation mechanism is essential to encourage students to actively participate in the course, enhancing their learning outcomes and interest. This approach nurtures environmental art and design professionals with enhanced innovation and practical capabilities.

In addition, teachers from different specializations in our art and design program have formed a curriculum teaching team. They regularly conduct teaching and research activities, communicate about classroom situations, and discuss teaching designs and issues, to continuously improve teaching content and instructional design. The combination of teachers from different specialization areas fosters a creative and dynamic team that benefits future endeavors such as teaching skills competitions, the development of high-quality courses, and resource libraries.

## **4 Innovative teaching approaches for curriculum implementation**

### 4.1 Project-based curriculum design

In our environmental art and design program, the "Three Constitutions" curriculum is primarily designed in a project-based format, which is integrated with practical training that aligns with the profession. Within this curriculum design, we deconstruct the knowledge points of the three constituents and incorporate them into actual design projects within the environmental art program. This project-based approach connects the constituents' meaning and function to the professional context, allowing students to deeply understand the constituents' essence and apply this knowledge to address specific issues within the profession. The project-based teaching design also emphasizes enriching and expanding the

curriculum content by focusing on the latest industry developments and trends. It introduces more vivid cases and practical projects closely related to the profession, enabling students to apply foundational constituent knowledge to real-world professional problems.

#### 4.2 Integration of moral and political education in the curriculum

The aim of education is not only to impart knowledge but also to stimulate personal potential and self-awareness. Different courses should integrate moral and political education based on the characteristics and features of the course. The "Three Constitutions" instructors should delve into the moral and political elements behind the knowledge points of the course and naturally incorporate them into the teaching process. For example, the understanding of truth, goodness, and beauty is a primary theme in moral and political education. This aligns with the constituents' interpretation of beauty and prompts consideration of how the understanding of "truth" can be integrated with "goodness and beauty" in the field of environmental art. In the color constituents module, for instance, the knowledge point of "color hue" can be linked to discussions about China's most beautiful traditional colors, thus instilling a sense of patriotism and national pride in students. In the graphic constituents module, appreciation of paintings by renowned contemporary Chinese artists like Wu Guanzhong and Zhao Wuji can help students recognize the beauty of constituents in Chinese painting. In the spatial constituents module, the assignment of studying excellent domestic and foreign architectural designs allows students to discover and appreciate the beauty of constituents in architecture. Our school is located in Kunming, Yunnan Province, with unique geographical advantages and abundant ethnic cultural resources. Therefore, the "Three Constitutions" curriculum can be integrated with the environmental art and design program to transform aspects of local development and historical-cultural dissemination into project-based practical teaching.

#### 4.3 Synergy between traditional handcraft and computer methods

The goal of the "Three Constitutions" curriculum is to cultivate students' creative thinking, aesthetic abilities, and practical skills. Both traditional handcraft and computer-based methods are commonly used in teaching "Three Constitutions". Traditional hand-drawing and computer graphics are fundamental techniques in art and design, with neither being superior to the other. Each method has its strengths and advantages for conveying different aspects of course content. In the plane composition module, traditional hand-drawing can enhance students' skills in manual illustration and creativity, providing a link to subsequent courses on hand-drawing techniques in the environmental art program. In the color constituents module, the process of mixing colors through traditional handcraft fosters students' subtle perception of color hue, brightness, and purity, aspects that computer-based color selection cannot fully address. However, computer-based color selection offers advantages in environmental art program skills like computer modeling and rendering, which are vital but not covered by traditional handcraft. In the three-dimensional constituents module, activities like semi-three-dimensional construct designs and physical model construction are traditionally done by hand. These build students' practical skills and create a smooth transition to subsequent courses such as model-making and soft furnishing design in the environmental art program. Simultaneously, computer-aided design can be used to collaborate on project-based curriculum activities, thereby enhancing alignment with the profession.

Therefore, in the teaching process of "Three Constitutions", these two methods are not contradictory. The most ideal approach is to allow traditional handcraft skills and digital design methods to complement and intertwine with each other, leveraging the strengths of both to nurture students' innovative awareness and practical abilities.

#### 4.4 Integration of artificial intelligence (AI) technology in teaching

The emergence and rapid development of modern artificial intelligence (AI) technology have significantly impacted the entire design industry and traditional design processes and methods. For the field of environmental art and design,

educational reforms should proactively respond to the challenges posed by AI technology. It is essential to timely integrate AI technologies with the traditional "Three Constitutions" curriculum. The educational goals of "Three Constitutions" in cultivating students' creativity align inherently with the essence of AI technology. This integration creates a learning experience that is both creative and practically innovative. The introduction of AI drawing software, such as Midjourney, into the "Three Constitutions" curriculum (covering plane, color, and three-dimensional constituents) can provide students with authentic and exciting learning experiences. For example, students can interact with AI to generate personalized creative design images based on their understanding of the knowledge points of the "Three Constitutions". This intelligent application sparks enthusiasm and passion for learning among students and helps them better grasp the principles of constituents. It also enables students to use AI technology for creative exploration and discover new possibilities in the field of environmental art and design.

The following figures, Figures 1 to 3, represent design illustrations generated using the Midjourney drawing software in conjunction with the "Three Constitutions" curriculum. This approach fosters creative thinking and innovative practice among students. Furthermore, the curriculum can incorporate AI technologies to engage students in real and compelling learning experiences.

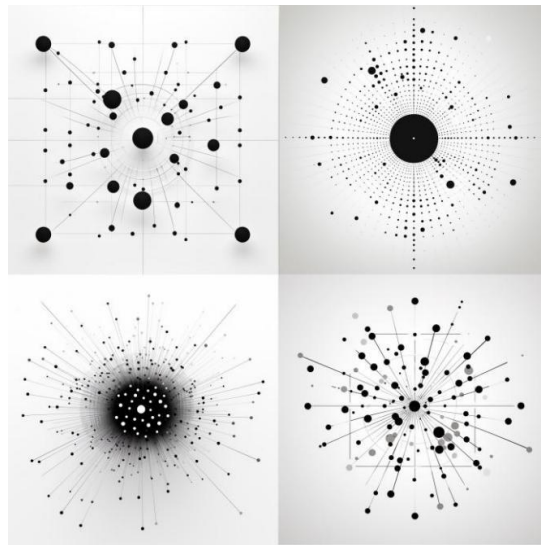


Figure 1. Plane composition: composition of points (self-drawn by author AI).

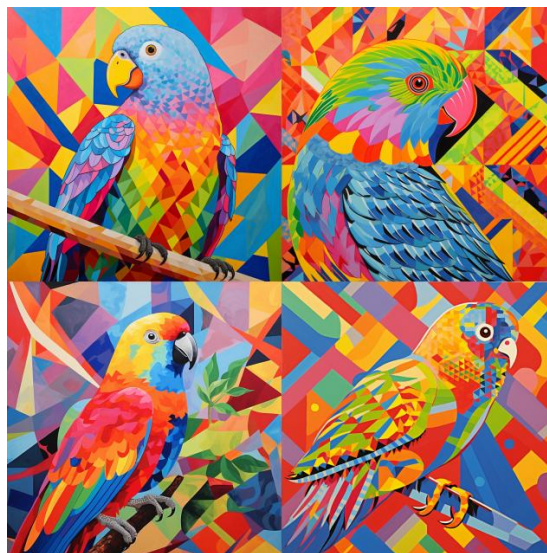


Figure 2. Color constituents: color expression of parrot (painted by author AI).



Figure 3. Architecture and interior design: constitutive expression of curves (author AI self-drawing).

## 5 Conclusion

In this rapidly changing era of evolving teaching methods and information technology, design education is undergoing a modern transformation. One crucial concern for vocational colleges is how to nurture high-quality environmental art professionals who stay current and meet the demands of the industry. The teaching of the "Three Constitutions" cannot remain stagnant but should actively explore new teaching concepts and modern technologies to facilitate a deep integration of the curriculum with the profession. Through the educational reform and innovative exploration of the "Three Constitutions" curriculum in the field of environmental art and design, we aim to effectively align this foundational course in art and design with the practical needs of environmental art, in order to adapt to the requirements of the era.

## Acknowledgments

Fund Project: Scientific Research Fund Project of Yunnan Communications Vocational and Technical College, Mixed Teaching Application Research of Art and Design Courses Based on Intelligent Vocational Education Platform, Project No.: 2023SK024.

## Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

## References

- [1] Zhang MH. 2017. The necessity of differentiated teaching content in "three constituents" courses across various design disciplines. *Popular Literature and Art*, 12:262.
- [2] Li ZY. 2020. Research on the construction of basic art and design curriculum system in western universities: an analysis of art and design fundamentals in the context of "curriculum thought." *China Journal of Multimedia and E-Learning*, 1:45-46.
- [3] Zhu FD. 2015. A comparative study of traditional hand-drawing and modern computer teaching: taking the "fundamentals of composition" course as an example. *China Ethnicity Exhibition*, 11:50-51.