

Practice Teaching Reform of Forestry Art Design Major in Higher Vocational Colleges Based on Virtual Reality Technology

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Abstract:

With the development of Vocational Education in China, vocational education has changed from infrastructure construction to connotation construction. This paper studies the practice teaching reform of forestry art design major in Higher Vocational Colleges Based on virtual reality technology. Starting from the existing problems of practical teaching projects of art design majors in higher vocational colleges, this paper puts forward that promoting the transformation of practical teaching achievements to the market is an important way to improve the quality of talent cultivation of art design majors. At the same time, this paper puts forward the reform method of practice teaching project of art design major in Higher Vocational Colleges Based on the marketization of training results. The experimental results show that this method can improve the quality of talent training of surgical design specialty.

Keywords: *Virtual reality, forestry art design, professional practice, teaching reform.*

I. INTRODUCTION

After years of continuous reform, the teaching reform of art design major in higher vocational colleges has made great progress, and the teaching effect has improved significantly. The most remarkable performance is the diversification of training works of art design major students, which can be seen from the training works exhibition of Art Department of our college every semester. In particular, the professional basic courses of art design major pay attention to the cultivation of students' innovative consciousness. Students' practical training works constantly break away from the inherent mode of thinking and adopt new materials and new techniques. The implementation of these teaching reforms has expanded the students' way of thinking, improved their sense of innovation, and played a huge role in promoting the quality of Higher Vocational Art and design talents training.

Teaching reform is the inevitable requirement of professional development, but it will be accompanied by some problems. First of all, for the sake of "innovation", the training projects of some courses are out of touch with the training objectives of the courses. It seems that they are designed for the purpose of exhibition, focusing on form and content, and paying too much attention to the novelty of art forms, while ignoring the role of training projects in the training objectives of the courses. Secondly, the use of new materials and new technology increases the learning cost of students, so that students choose new materials and new technology in order to improve the display effect of works, which increases the economic burden. Thirdly, there is a phenomenon of "virtual problem and virtual work" in the practical training project, and the cultivation of students' post skills has a strong subjectivity, which is out of touch with the actual post skills.

II. STUDIO TEACHING MODE OF VISUAL COMMUNICATION DESIGN COMBINING PRODUCTION WITH TEACHING IN HIGHER VOCATIONAL COLLEGES

2.1 Inspiration from Bauhaus workshop

In 1919, the national Bauhaus was founded in Gropius, Germany. He carried out a comprehensive, systematic and thorough education reform on design education. In the early days of Bauhaus, the school implemented a dual track teaching mode combining basic courses and workshop training, and implemented the factory apprenticeship system. The system among masters, craftsmen and apprentices was based on the medieval guild regulations. Under this system, there are two types of teachers: master sculptor and master craftsman. The whole teaching time is three and a half years, and half a year is the preparatory course. They study basic modeling, material research and factory principle. Then, according to the students' specialty, they will enter the apprenticeship education in the next three years. Those who have passed the apprenticeship education will be issued with "Technician Diploma". Then, after practical work, those who have achieved outstanding results will enter the improvement class (Master's class). This kind of class is called "structural thinking class". Only after graduating from the advanced class can we obtain the Bauhaus diploma. The school trains comprehensive talents with artistic creation and technological skills.

Bauhaus has established the workshop modern design education mode of "new unification of art and technology". Its important enlightenment is as follows: 1. The success of teaching practice should be attributed to the dual track. 2. The design emphasizes free creation and opposes imitation and plagiarism; 3. Combining handicraft with machine production; 4.

Combining learning with production practice, students have both practical ability and theoretical literacy; 5. Combining school education with social projects.

2.2 The schema of studio teaching mode based on the combination of production and education

Under the guidance of the concept of the combination of production and education, the studio teaching mode is implemented by different levels of the combination of production and education. It is implemented by a large studio group. The department teaching unit as a whole becomes a big company, and the Department Office of the combination of production and education is the business department. Each design studio is a branch company of design and production in different directions. It is also the internship unit for junior students. The project studio is the design and production department of part of the project design, and it is also the teaching unit for the implementation of professional courses. Experimental studio is not only a scientific research institution for the implementation of R & D demonstration and investigation and analysis of basic courses, but also a teaching unit for the implementation of basic courses. Workshop studio is a production plant or company, and also a teaching unit for the practical training of technical courses. Entrepreneurship studio is not only an incubation base to support industrial development and Graduate Entrepreneurship, but also a teaching demonstration base for entrepreneurship education.

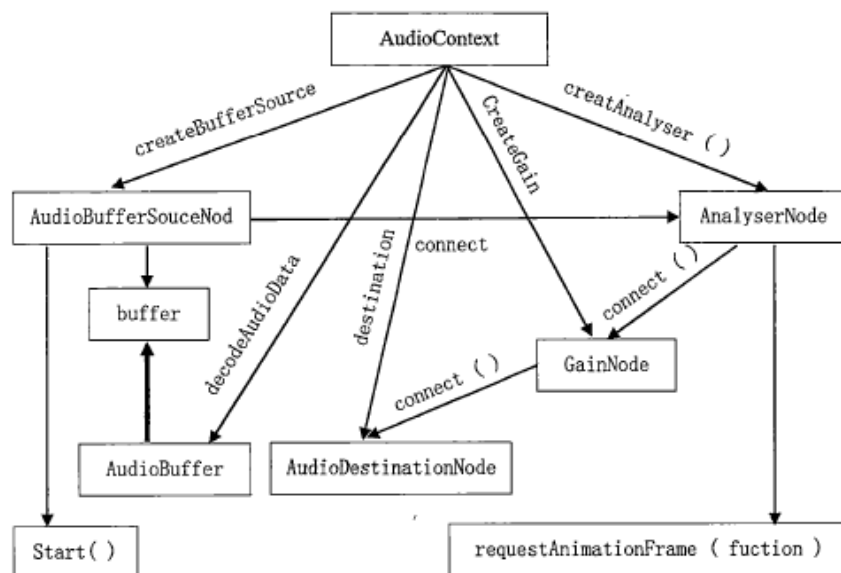


Fig 1: The level of combination of production and education, studio types and students' Participation

Development of production and Education -- experimental studio

The experimental studio is set up for the development of industry and education. It is mainly entrusted by the host teacher to do some experimental research on market research or product development. Setting a small topic in the classroom to experiment with students is a place to cultivate the spirit of experiment and exploration. Adhere to the rational and rigorous scientific experiment method, emphasize the students' creative participation process, acquire knowledge in the process of designing experiment and discussion, teachers effectively control the teaching process, have sufficient preparation before teaching, make detailed planning for the details of teaching, and design appropriate exercises. In addition, we should observe and record the students' behavior carefully, teach them according to their aptitude, cultivate their personality and innovative consciousness, and pay attention to the cultivation of their perception ability and thinking ability. The course content of this kind of studio is completed by systematic small projects, which is mainly implemented for the first-year students. The conclusions of the teaching contents such as design color, design sketch, three major components, basic pattern and market research are experimentally explored and verified. Such as the decomposition of color and light, the harmony of three primary colors, the psychological feeling of color and so on, we can draw a conclusion with the method of scientific experiment.

2.3 Production education cooperation project studio

The project studio is based on the individual responsibility system and the project responsibility system. The host teacher is fully responsible for the operation of the studio, integrating the curriculum, knowledge points and project design practice, and transforming the traditional closed teaching into the open teaching oriented to the actual production. Learning from the project teaching integrated curriculum design mode of "task driven and behavior oriented" implemented by German vocational education, the subject structure is completely broken, and knowledge and skills are organized into several project teaching. The teaching is carried out around projects, mainly involving sophomores. Teachers undertake projects closely related to the course, such as logo design, font design, advertising photography, pop design, catalog design, advertising design, corporate image design, etc. Under the guidance of teachers, students participate in business negotiation, material evaluation, market research, design and production, etc. So that students' professional quality and ability can be cultivated in real life, and professional theoretical knowledge can be mastered in the process of communication between teachers and students.

2.4 The separation of production and Education -- workshop

The teachers of the workshop are composed of teachers and technicians in the school. The workshop is a school run enterprise or a factory in the industrial park. The main purpose is to provide technical practice and fixed post internship for teachers and students. For example, prepress design courses need to be taught in the printing factory, which also provides external conditions for double qualified teachers. For school teachers, they not only need solid theoretical knowledge, but also practical professional design skills. This kind of workshop is mainly for the second and third grade students and teachers to make practical training of book binding, printing, jingtai and other technology. In the visual communication design major, it mainly includes printing factory, packaging factory, exhibition factory, video production center and metal, stone, wood and other processing plants.

2.5 Integrated production and education design studio

The teachers in charge of the design studio participate in the management and guide the students' learning as enterprise designers. The studio is completely open to the outside world, while the students participate in the actual design and production process as prospective employees. The studio sets posts according to the design company, and takes turns regularly, so as to adapt to the requirements of different jobs. Studio to participate in the market economy as a company, not only to undertake practical projects, but also to bring students the most cutting-edge social design information. The design studio takes the place of the teaching and Research Office, takes the host teacher as the subject leader, takes the professional technology application as the core, takes undertaking social projects as the main task, and mainly undertakes various corporate image design, advertising design, logo design, display design, copywriting planning and other projects. The teacher in charge of the studio leads the teachers and students of the subject to complete the project design according to the company's requirements, and complete the professional comprehensive training in the process of making the design project. This kind of studio teaching mode is very suitable for the cultivation of employability of modern vocational education.

III. SIMPLEMENTATION AND OPERATION OF STUDIO TEACHING MODE OF VISUAL COMMUNICATION DESIGN COMBINING PRODUCTION WITH TEACHING IN HIGHER VOCATIONAL COLLEGES

3.1 The operation of studio teaching mode of visual communication design in Higher Vocational Education

The Department will increase the function of marketing and business development, take

market leading and demand as the basis for course content adjustment, and increase business managers. It is mainly responsible for the marketing and business development of all kinds of studios in the Department. The office will increase the functions of industrial cooperation and business reception, and set up the production and education office. The teaching and Research Office will be replaced by the studio, and the teacher in charge of the design studio is the discipline leader. He is also the director of teaching and research. The design studio will determine different studio directions according to the business and study directions. The director and general manager is responsible for the teaching and business development of the whole department, and the Institute of visual communication design will be established on the basis of the library. The transformation of administrative functions is the guarantee of the promotion of studio teaching mode of combination of production and education.

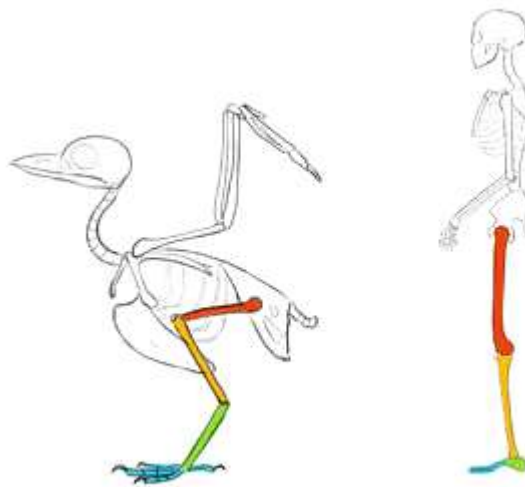


Fig 2: A model of a bird

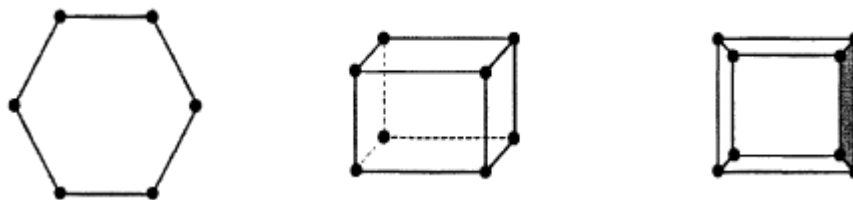


Fig 3: Basic form and supporting point

3.2 The implementation basis of studio teaching mode of combination of production and teaching

The studio teaching mode of the combination of production and education puts forward more strict requirements for the overall teaching level and practical ability of the teachers in charge of the studio. The establishment of a team of teachers with reasonable structure, excellent quality, certain research and design ability and with "double qualification" quality and "double qualification" structure is the basis to ensure the implementation and operation of the studio teaching mode of the combination of production and education. All kinds of studios have different requirements for teachers: the design studio host teacher is a design type teacher, and the teacher should have higher design level and practical experience, and organize teaching and research activities as a discipline leader; the project studio host teacher is a "double qualification" quality teacher, who has both designer's operation experience and teaching experience. The teacher in charge of the workshop is the technical master, and the teacher in the workshop should form a "double qualification" structure. During the students' practical training, the technical master and the theory teacher guide the teaching activities together. The teacher in charge of the experimental studio is a research-oriented teacher. He should have certain research ability and rich experience in scientific research. He should use the method of designing experiments to guide students' learning, and use the experimental results to summarize knowledge points. The main body of entrepreneurial studio is teachers with entrepreneurial experience and graduates with entrepreneurial conditions, which are invested in entrepreneurship through preferential policies of College Students' entrepreneurial incubation base.

"Double qualified" quality, "double qualified" structure and research-oriented teachers are the necessary conditions for the implementation of studio teaching mode of combining production with education. The department absorbs senior designers to preside over the studio, drives teachers to participate in market projects, and strengthens operation ability. In addition, professional teachers are sent to the company for training. In addition, industry experts and enterprise technicians are employed to teach or give lectures in the studio part-time. Through a series of relevant measures, the structure of the teaching staff is adjusted to meet the requirements of the practical operation level of the studio, so as to ensure the effective and normal operation of the studio teaching mode of combination of production and teaching.

The hardware equipment and facilities of the studio are the basis of the studio teaching mode of combining production with education. The studio should have a good simulation atmosphere of the design company. Ensure to meet the necessary hardware requirements of projectors, printers, scanners, digital cameras, computers, computer tables, conference tables,

etc. for the establishment of various types of studios. The venue needs to accommodate a large classroom with more than 25 people. The indoor requirements are stable power supply, smooth network, good lighting and ventilation conditions.

Referring to the construction standard of national vocational skill appraisal institute, we should establish the skill appraisal institute of visual communication design discipline, strengthen the training of professional teachers, obtain the qualification of examiners of various majors, improve the vocational skill appraisal training system, and formulate scientific and operable technical standards. The design studio will organize and improve the curriculum system of various kinds of qualification certification, establish the curriculum standards and studio direction corresponding to the type of work, and ensure that students can successfully obtain the professional qualification certificate of the required type of work.

IV. REFORM METHOD OF PRACTICE TEACHING PROJECT OF ART DESIGN MAJOR IN HIGHER VOCATIONAL COLLEGES BASED ON MARKETIZATION OF TRAINING RESULTS

(1) Flexible use of creative markets to promote the realization of market value of training results

After several years of development, creative Fair has become an important channel for college students to show their creative works market value. Due to the continuous improvement of the art quality and the unique originality and scarcity of the works, we can use the form of College Students' creative market to display and sell the works around the college or in the art exhibition hall, which can not only improve the reputation of the college, show the students' creative style, but also increase the students' income, Improve students' enthusiasm for creation. If the number of creative works is large, it can also be combined with online sales platform to expand social influence. It should be noted that the form of artistic expression is of course important, but it should focus on training students' design thinking. On the basis of improving the design content, and in line with the curriculum training objectives, we should seek the high quality and market value of the design carrier.

(2) Promote the reality of practical projects with the help of the platform of Art Design Competition

At present, it is a development trend for enterprises to participate in specialty construction. Due to the different characteristics of each specialty of art design major in higher vocational colleges, the mode of school enterprise co construction is also different. For example, at

present, many art design competitions are participated in by enterprises in the whole process of topic setting and evaluation. Enterprises determine the competition practice projects according to their own needs, and the competition requirements and specifications are consistent with the enterprise practice projects. The award-winning works are adopted free of charge by the enterprises, and the award-winning authors are awarded. Both sides win-win, with certain authority and sustainability. It avoids the disadvantages of the previous practice project virtual proposition, and is another way to achieve school enterprise cooperation with the help of design competition platform. With the help of these competition platforms, the quality of students' design works has been significantly improved, and the value of training results to the market has been improved.

(3) School enterprise integration to promote the reform of practical teaching projects with actual enterprise projects

As an important way of higher vocational education mode and specialty construction reform, school enterprise integration has been accepted by many colleges and universities. For example, the architectural decoration engineering technology specialty of our college cooperates with Beijing Haitian Decoration Group, and the environmental art design specialty carries out school enterprise integration with the help of Hengshui Sanyuan color architectural Decoration Engineering Co., Ltd., and designs according to the actual requirements of customers. The practicability of the practical project has been improved significantly.

Studio is an open teaching space. Under the guidance of colleges and departments, teachers in charge of design studio, project studio and experimental studio are responsible for teaching organization arrangement and daily teaching management. The studio teaching mode of combination of production and education introduces the "double selection" competition mechanism, which pays according to work and pays for excellent work (entrepreneurial studio and workshop studio are responsible for their own profits and losses). We should make clear the relationship between responsibility and rights, and make rational use of school educational resources. Every semester, departments and colleges carry out process management and objective assessment on studio teaching. The assessment indicators are the quantity and quality of studio achievements, the construction of characteristic direction, daily management and student satisfaction evaluation. Attention should be paid to the integration of company system and credit system, the coordination of job responsibility and distribution system, the docking of project management system and teaching and research department system of design studio, the coordination of student role, job responsibility and constraint mechanism of studio, and the coordination of tutor system and counselor system. Fig 4 shows the creator modeling in art and design works.

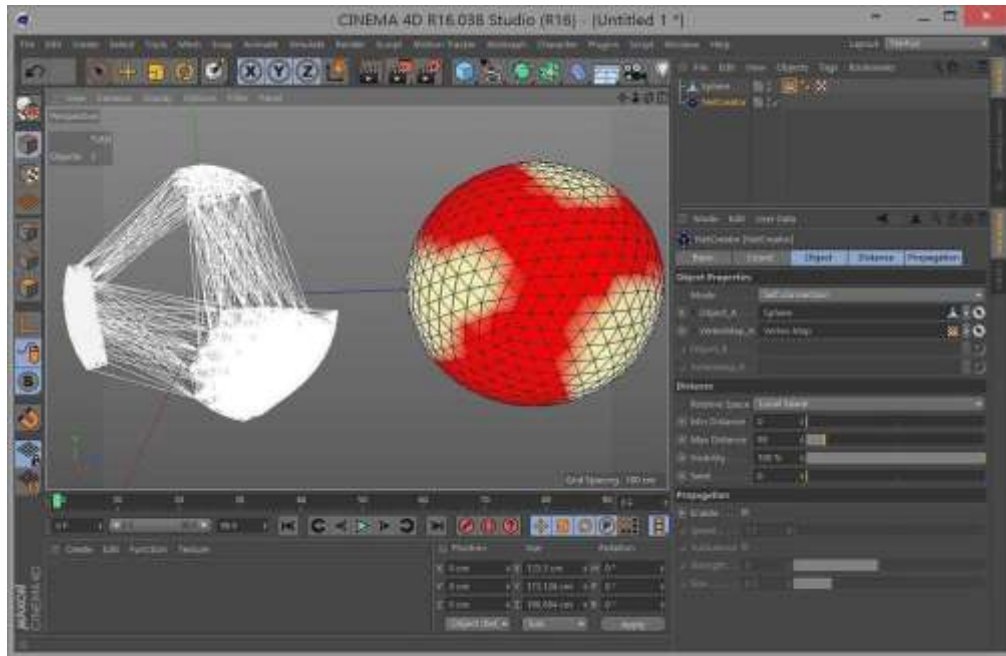


Fig 4: Creator modeling

V. CONCLUSION

Visual communication design industry bears many social responsibilities in the whole social system, such as consumption information communication, visual culture communication, improving the quality of life and so on. Due to the strong operability of the visual communication design discipline, it is very consistent with the orientation and training objectives of higher vocational colleges. In recent years, the visual communication design education in higher vocational colleges has effectively solved the shortage of designers for the rapid development of economy and society. The implementation of the studio teaching mode of combination of production and education is the only way for higher vocational colleges to achieve the goal of cultivating innovative talents with applied skills in visual communication design.

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