



## Discussion on the Application of Quality Education in Architectural Computer Rendering Course

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### Abstract

Quality education is an important part of the current curriculum teaching in Chinese universities, and its content needs to be integrated into the curriculum teaching. Objectives: this paper aims to find the proper way to combine teaching design of the course of architectural computer rendering and quality education. This paper find using teaching methods such as characteristic cases and competition can deepen students' understanding and recognition of China's excellent traditional culture, encouraging students to participate in competitions and obtain professional qualification certificates, as a measure of value-added evaluation, can develop students' rigorous professional quality. In general, proper teaching method and evaluation method are the key factors to improve college students' professional quality and general quality.

### The meaning of quality education

China's higher education should adhere to the central link of establishing morality and training talents. Quality education should run through the whole process of education and teaching to achieve the goal of educating people in the whole process and in all directions, so as to improve the quality of talent training. We should integrate the guidance of values into the teaching of knowledge and the cultivation of ability, help students shape a correct world outlook, outlook on life and values, conform to the historical trend and adapt to the requirements of the new era.

This paper focuses on the curriculum standard of architectural computer rendering course in our school, and studies the curriculum quality construction from six aspects, such as curriculum training objectives and evaluation system etc. in order to improve the connotation and quality of the curriculum.

### Discussion on Quality Education in the Course of Architectural Computer Rendering

#### Clarify the training objectives of curriculum quality education

In our newly revised teaching objectives, the knowledge objectives, ability objectives and quality objectives are described in detail. In terms of knowledge objectives and ability objectives, students are required to quickly understand the characteristics of each software, master the theoretical knowledge

and practical skills of software, and have the ability to make indoor and outdoor models, animations and texts of buildings. In terms of quality objectives, we should cultivate students' aesthetic awareness and craftsmanship, have good cultural accomplishment and stable psychological quality, enhance their sense of responsibility and innovation spirit, highlight the quality of honesty, trustworthiness, solidarity and cooperation, and form good professional ethics and professional quality.

#### Integrate quality education elements based on curriculum content

The course of architectural computer rendering is a basic course of architectural design specialty in higher vocational education. It is set up in the third semester and provides good technical support for the exhibition of works in subsequent architectural design courses. Projects are adopted in the whole progress of teaching. Taking a complete architectural design project as an example, it sets five modules according to the work process, covering five classic design software, including Sketchup, Enscape, Photoshop, Illustrator and InDesign etc. Each module has 2 to 3 tasks, including several knowledge points and skill points. It has formed a curriculum system with project guidance, sub divisional tasks as the skeleton, knowledge points and skills points as the content. In order to meet the requirements of the new curriculum standard on quality training, we comprehensively analyzed the teaching content of the course, and integrated

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professional quality into each module through research, discussion and combining the characteristics of the course. After each module has completed the specified teaching tasks, appropriate cases are introduced in the practical training. While imparting knowledge and skills to students, students' values are strengthened to ensure that quality education runs through the whole teaching progress reasonably [1].

Module 1 Learns about the unique wooden frame architecture, appreciate the beauty of ancient architecture, understand Chinese philosophy, and develop cultural identity and cultural self-confidence through the construction of ancient architecture models and the production of indoor furniture; Module 2 develops the sense of responsibility for teamwork and excellence through the division of labor and cooperation of classic garden scene animation; Module 3 shares the hand-painted drawings and design works of the older generation of Chinese architects through the production of the plane, elevation and general drawing of modern and contemporary classic buildings. Taking Liang Sicheng and his wife as examples, it introduces the protection of the ancient buildings of the masters, the design process of the Monument to the People's Heroes, and understands the masters' feelings and noble qualities, so as to educate students in patriotism and cultivate craftsmanship [2]; Module 4 cultivates a rational, scientific, innovative and practical design attitude through the analysis of excellent architectural cases at home and abroad; Module 5: Cultivate correct aesthetic interest and international vision through the analysis of excellent cases of contemporary college students' competitions.

### Multi teaching methods promote the integration of quality education and professional education

**Method 1:** Combine characteristic building cases with practical training. For example, we use the main hall of the Foguang Temple and the Webmaster Park to guide students to complete model scenes and making animation through data collection, analysis and discussion, and teamwork, in order to fully mobilize students' independent learning ability, cultivate students' professional quality and establish a correct world outlook through imperceptible influence.

**Method 2:** The content of quality education is combined with interesting games and competition. In teaching, students' enthusiasm for learning should be aroused as much as possible, a good and active classroom atmosphere should be created, and the understanding and recognition of excellent traditional culture should be deepened in a quiet way, so as to stimulate students' enthusiasm and pride for serving the motherland.

**Method 3:** The online and offline hybrid teaching method is adopted. The "Superstar Learning Link" teaching platform is used to provide high-quality resources and organize online activities such as thematic discussions, group tasks and Tencent meetings. Students can consult the teaching resources on the platform at any time and actively participate in online activities. In class, students' problems and difficulties in learning and doing can be explained intensively. After class, online tutorship can be continued through the teaching platform or WeChat.

### Build a "double qualified" teaching team with both ability and integrity

Teachers' correct world outlook, outlook on life and values, lofty professional ideals and ethics, and excellent comprehensive quality are the keys to ensure quality education [3]. Teachers should be trained by various education platforms and school

enterprise cooperation projects. A long-term effective system for enterprise practice should be developed. Teachers should be engaged to take part in teaching research and scientific research activities. Various activities in the form of tea parties, salons, etc. should be held in order to let the old to lead the new. A "double qualified" teaching team with a reasonable age structure and a combination of full-time and part-time teaching can be built. Teachers should be transformed from simple knowledge disseminators into the shapers of sound personality and guides of correct values.

### The development of teaching resources of quality education

We should develop digital textbooks that adapt to the development needs of industry enterprises, integrate quality education, and reflect the characteristics of vocational education types. The textbook framework is discussed and negotiated by professional teachers and industry enterprise teachers, and multiple types of digital resources are superimposed on paper books to break the limitations of graphics and text, embed teaching videos, and facilitate fragmented learning.

We shall also further develop and improve the teaching platform, upload the teaching courseware, teaching plan and micro videos. During the progress of course construction, traditional architectural models, animation, excellent works of China's older generation excellent architects and emerging architects, and contemporary excellent college students' competition works should be collected in the course case resource library.

### Integration of evaluation system and professional quality

The evaluation method of the course of architectural computer rendering is dominated by the students' learning quality, and it can be divided into process assessment, final assessment and value-added assessment in combination with the course knowledge, skills and quality requirements. Process assessment includes attendance, topic discussion, final test, project training, etc. The final assessment shall be conducted by students to organize the exhibition and report of works, and the evaluation of works shall be completed by means of mutual evaluation between student groups and teacher comments. Some innovative works shall be fully affirmed, and the works with insufficient depth shall be actively guided, helped and encouraged to improve. Students are encouraged to participate in vocational skills competitions and obtain vocational qualification certificates. These value-added evaluations can replace part of the process assessment. Through the multi-dimensional evaluation system, we can cultivate students' good professional quality.

### Discussion

In essence, quality education is integrated into the teaching of the course of architectural computer rendering in order to achieve the goal of establishing morality and cultivating talents, paying attention to the organic unity of preaching, teaching and answering questions. Classroom education focuses on strengthening the education of students' world outlook, outlook on life and values, inheriting and innovating the excellent traditional Chinese culture, and actively guiding contemporary students to establish a correct view of the country, nationality, history and culture, so as to cultivate more all-round talents for the society and make more contributions to social development.

### Conflicts of interest

The authors declare that they have no conflicts of interest to this work.

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### References

1. Kui L, Exploration on the Integration of Architectural Elements into the Ideological and Political Teaching of the Course "Hand drawn Rendering"- Taking Wuhan Engineering Vocational and Technical College as an example. Journal of Wuhan Metallurgical Management Cadre College. 2022;02:81-82.
2. Minjiao W. Optimizing Chinese and Foreign Architecture History Classroom with Ideological and Political Education. Modern Vocational Education. 2020;39:168-169.
3. Jinping M. Reflections on the Development of the Course "Landscape Rendering" for Landscape Specialty in Higher Vocational Colleges. Inside and Outside the Classroom. 2020;16:121-122.