

Research on teaching methods of interior furnishing design courses based on the 5G era

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Abstract: Discuss the design intervention of interior furnishing design courses under the background of 5G era, and provide a more optimized teaching reform plan for interior furnishing design courses. The interior furnishing design course after the teaching method reform should achieve a more precise and effective teaching effect. The interior furnishing design course has very important theoretical value and practical guiding significance. Add theory as a support to traditional practical courses, and make full use of the "smart Internet" in the 5G era to combine theory and practice with software and hardware technology devices such as VR and AR to solve the difficulties of course knowledge. Make full use of the "smart Internet" in the 5G era through VR, AR and other software and hardware technology equipment and the integration of interior furnishing design courses, so that the school resources can be optimally matched, and the teaching of interior furnishing design courses can be more refined, which provides a positive effect for college teaching Promoting role.

Keywords: interior furnishing design,teaching method,curriculum reform

1. Based on the significance and current situation analysis of the interior furnishing design curriculum reform in the 5G era

1.1 The research significance of this project

Interior furnishing design is an important course for the majors of interior design, environmental design, material science and art. It is a very practical course, and its theory echoes it, and harmonious coexistence. In the course of teaching, a series of issues are involved in the form design of architecture and indoor environment, optics and color decoration design, ergonomics and space design, materials and art design, indoor environment design and space furnishings, etc. This is not only about interior furnishing design. The content covered by the course is also related to disciplines such as architectural aesthetics, customs and culture, space aesthetics, design ethics, design style, material science, ergonomics, sociology, history, design psychology, etc. It is a system.

With the advent of the 5G era, people have entered a new era of "smart Internet". In our lives, the "smart Internet" brings us more convenience. People book tickets online, shop online, and order food online through mobile phones; Upgrade to remote control of the electrical appliances around you, and enjoy the great world outside without leaving your house; it is no exaggeration to say that the "smart Internet" allows us to experience the "real world" in the virtual world through software and hardware technology devices such as VR and AR. ", then if you can try to combine the "intelligent Internet" with the traditional teaching methods of interior furnishing design courses, this will be a major breakthrough in the teaching reform and innovation of interior furnishing design courses.

How to make full use of the convenience of the 5G era and the "smart Internet" in the course of course teaching has become a topic worthy of our research in the process of learning this course for teachers and students. How can we make full use of the practice of "smart Internet" to learn and master Designing professional courses with a strong nature, what learning methods can be used to receive good learning results, and what methods can be used to master the equivalent information of the actual connection between curriculum learning and the market. Facing these problems, teachers and students will face these problems together These problems lie in how the teacher correctly guides, the students' correct attitude and enthusiasm for learning, and the hard work they have made, the combination of theory and practice, and the expression of art in technology to continuously improve their comprehensive ability. Teachers and students work together to improve the level of teaching and learning of this course. It is necessary to pay attention to methods and methods, instead of continuing the traditional classroom teaching practice

mode, let alone abandoning the traditional teaching methods completely, because the traditional teaching mode has certain limitations and lags. , The purpose of our research is to reform classroom teaching based on traditional teaching in combination with "smart Internet" technology innovation, conform to the development of the times and improve the quality of education. Therefore, teachers and students need to face and solve the corresponding problems together. This is the purpose of the research on the teaching methods of this course. It not only reflects the solid theoretical research significance, but also has a strong practical research significance.

1.2 Analysis of the research status of this project

With the development and widespread application of Internet technology, traditional interior design related courses are no longer suitable for the development needs of the 5G era. There is a certain lag in classroom teaching and design practice, and it is difficult to meet the coordinated development of teaching and learning. Based on current teaching The current situation, the introduction of the practical part in the traditional theoretical courses, the full use of the "smart Internet" technology and advanced achievements in the 5G era, the combination of design theory and practice through VR, AR and other software and hardware technology equipment, simulating dynamic design scenarios, and integrating static The design renderings are transformed into a dynamic three-dimensional virtual space, and computer virtual technology is used to solve the knowledge difficulties in traditional design courses. Under the background of the 5G era, make full use of existing school resources (training room teaching aids, teacher and student mobile phone teaching software, etc.) to effectively improve teaching efficiency and quality, mobilize students' enthusiasm for classroom learning, and make full use of existing online course platform resources and mobile phones Software and other resources realize communication and interaction during and after class, shorten the distance between teachers and students, and expand students' time and space for learning.

At present, there are many research results on the teaching methods of related courses of interior design, such as Qiao Guoling's "The Teaching and Practice Exploration of Furnishing Design Courses". In this article, the characteristics of practical teaching of interior design majors and strengthening practical teaching are the key points of college education reform. Based on the development status of the interior design profession, the main problems that are out of touch in the practice teaching of interior design are analyzed, several teaching methods to strengthen students' practical ability, and practical applications and structures have been explored. Some research has been made and put forward Practical teaching is the purpose and requirement of interior design course teaching; first, practice is to emphasize the combination of theory and practice in the teaching process, and focus on students' hands-on ability; second, innovation refers to the continuous innovation of teaching methods and practical methods. The article briefly introduces that in the teaching of interior design professional technical courses, due to the limitations of traditional equipment and technology, it is difficult for traditional teaching methods to achieve teaching effects. Therefore, by increasing the comprehensive teaching links of perceptual interaction such as VR and AR, reform Traditional teaching methods make students more interesting in the process of learning professional courses, so that students can actively participate, actively think and explore, and form an interactive learning atmosphere between teachers and students. The traditional "cracking duck" classroom teaching mode has been changed, and the classroom teaching mode based on students' independent learning activities and teacher-oriented guidance is realized, and the learning efficiency of students' practical courses has been improved. In addition to using the "smart Internet" through VR, AR and other software and hardware technology equipment, it should also combine more technology and design cases in the enterprise with teaching, and pay more attention to the docking of design practice and the market. Design theory knowledge is integrated into classic design practice cases, from the shallower to the deeper, step by step, so that students can master these learning methods faster and improve their comprehensive learning ability. Looking at the status quo of teaching reform and research on relevant professional courses of interior design in colleges and universities, many theoretical discussions have been made on teaching methods, and many practical explorations and experiments have been made, forming a comprehensive consensus-teaching must go The teaching method of "research, learning and production", the teaching concept of combining design theory and design practice, school-enterprise cooperation, namely school and design company, school and architecture and environmental factory, school and exhibition institution, school and architecture and environment Sales department cooperation and so on, these excellent successful research and good platform are worth learning and learning from this topic.

Design is a creative activity, a combination of science and technology and art. From the perspective of thinking, design thinking is the unity of scientific thinking and artistic thinking. Design is a science,

and design methods are also scientific methods. Scientific design methods and creative thinking are dialectically unified and complementary. The teaching of interior design related courses also requires the use of scientific teaching methods. With the help of teaching equipment resources, human resources and interior design knowledge internship opportunities, the combination of theory and design practice can make students interested in professional courses and stimulate thinking. Master scientific teaching methods and learning methods, and the relationship between "teaching" and "learning" between teachers and students will be more harmonious and harmonious. This not only lays a certain foundation for cultivating their scientific learning methods, but also lays a solid foundation for their future design practice. Solid foundation.

In order to connect the teaching of interior furnishing design courses, teachers and students also need to pay attention to the design consultation, design trends and design dynamics outside the campus, pay close attention to the development trend of the market, and the new materials, new technologies and new processes in the interior furnishing design industry. , Collect all kinds of materials related to this course, obtain materials and materials as much as possible, enrich the knowledge base of professional course learning, and broaden the horizons of teachers and students, achieve the connection between theory and practice, and continue to pay attention to Milan International Architecture and Environmental Design Exhibition, Paris International Design Exhibition, Shenzhen International Design Exhibition, Guangzhou Design Week, Shanghai Design Week, Guangzhou University Graduation Design Exhibition, etc., actively form a team to participate in related design competitions, exercise their comprehensive design capabilities, and improve personal overall Design level, follow the teaching concept of applying what you have learned.

In the teaching process of professional courses, whether it is theoretical teaching or practical teaching, teachers not only have to think about what teaching methods to adopt? How to teach? What specific methods and methods are used? How effective is the teaching? How do students evaluate? At the same time, students also need to think about how to master scientific learning methods and thinking methods? What kind of learning method is used to study is more conducive to the improvement of one's own comprehensive ability? That is, the relationship between "thinking" and "action". "Thinking" as I understand it means thinking, thinking, and thinking. That is, the thinking of teaching, the thinking of teaching, the thinking of teaching, the thinking of learning, the thinking of learning. The so-called "action" refers to actions, practices, and operational activities. In the teaching process of interior furnishing design courses, the teacher should coordinate and unify "thinking" and "action", coexist with each other, and adopt systematic teaching ideas and methods, so that the teaching of professional courses uses systematic concepts, ideas and methods It is the desire of teachers and students to explore and solve knowledge, so that such exploration and solving can achieve the expected teaching purpose and learning purpose.

It is learned from the above domestic and foreign research results and design consultation that although there are many exploratory research results in teaching so far, the mode and method of interior furnishing design course teaching needs to be further, in-depth, and practical. , Carry out systematic research effectively. The research of this subject will focus on the use of local interior design and academic advantages, and further research on the discussion and tentative innovation of interior furnishing design classroom teaching methods from the level of "real problem practice", aiming at discovering, digging, inheriting, and outstanding The teaching methods of interior furnishing design, looking for teaching methods that are easy to learn and accept, comprehensively combing the teaching methods of interior furnishing design and the aspects of architectural and environmental history, constructing a systematic system of architectural and environmental history, focusing on the artistic expression methods of interior furnishing design And the skills and methods of building and environmental product model making, creating a learning method system of theory and practice, enrich the systematic methodology of the interior design major, truly realize the modern design teaching mode of "learning, research, and production", which is more conducive to the organic connection between modern interior design teaching and the "zero docking" of the enterprise, and will provide future employment for students majoring in interior design The direction and career of life lay a solid theoretical foundation and design practice foundation. In order to build a teaching method system for interior design classrooms, its research results have reached a certain degree of practicality, effectiveness and promotion, and played a role in attracting new ideas, and effectively promoted the construction and development of classroom teaching of interior design-related professional courses in colleges and universities. This meager effort is precisely the duty and responsibility of full-time teachers in colleges and universities.

2. Curriculum reform content of interior furnishing design, reform objectives and key issues to be resolved

2.1 Curriculum reform content of interior furnishing design

1) The practice part is added to the traditional theoretical courses, theory is added to the traditional practice courses as support, and the "smart Internet" in the 5G era is fully used to combine theory and practice through VR, AR and other software and hardware technology equipment to solve the curriculum knowledge difficulty.

2) Under the background of the 5G era, make full use of existing school resources (training room equipment, teachers and students' mobile phones, etc.) to maximize teaching quality and teaching efficiency, and mobilize students' enthusiasm for classroom learning.

3) Reasonably use the curriculum resources of the existing online course platform and mobile phone software to realize communication and interaction during and after class to shorten the distance between students and teachers, and expand the time and space for students to learn.

2.2 Curriculum reform goals of interior furnishing design

1) Update the traditional drawing software in the training room and add VR, AR and other new design software that can realize the human-computer interaction to complete the virtual embodiment, and increase the VR experience equipment in the school, so that you can master the VR technology for the students and complete the design practice in the school, To realize that students can do practical design projects without leaving school.

2) Under the background of the 5G era, we make full use of our mobile APP (such as indoor drawing software such as VR dressing home) to make students love to complete classroom practice as much as they love to play mobile games.

3) Use convenient network technology to realize online school-enterprise cooperation, and always participate in the practical projects of the enterprise to learn the advanced technology of the enterprise so as to combine classroom teaching and social practice to achieve zero docking between the classroom and the market.

2.3 The key problems solved by the curriculum reform of interior furnishing design

1) Research on the teaching process and course structure of interior furnishing design course

2) Research on the methodology of interior furnishing design course teaching

3) How to make full use of the "smart Internet" in the 5G era through VR, AR and other software and hardware technology equipment and interior furnishing design courses and integration

4) How to realize the construction of a resource sharing platform for curriculum teaching and online school-enterprise cooperation

In short, this project analyzes and researches design theory and design practice teaching, forming a scientific methodology teaching system of "teaching according to talents", "research, learning, and production". Then obtain the research results of the classroom project teaching methods of interior design related professional courses, so as to get the vigorous promotion of the feasibility and applicability of similar courses teaching methods, and achieve excellent teaching effects of interior design related courses.

3. The specific implementation plan, implementation method, implementation plan (including annual progress) and feasibility analysis of the interior furnishing design curriculum reform

3.1 Implementation plan for the curriculum reform of interior furnishing design

On the basis of the preliminary field investigation, it pays attention to the comparative research and actual teaching effect of the teaching methods of interior furnishing design courses, and takes "research, learning and production" as the final formation of a systematic research on the teaching methods of interior furnishing design classrooms, "thinking, methods, "Practice" will become a research system for building interior furnishing design course teaching methods, forming a professional design course

teaching with a teaching method system of "learning to apply", rational use of school resources and the "intelligent Internet" in the 5G era. Through VR, AR and other software and hardware technology equipment and interior furnishing design courses and integration, participating in the practice of interior furnishing design projects, participating in interior furnishing design competitions, school-enterprise cooperative resource sharing and other diversified teaching methods to activate teacher-student interaction. The teaching atmosphere of professional courses expands the depth and breadth of professional courses teaching and learning, enriches the knowledge system of interior furnishing design courses teaching, and meets the needs of the rapid development of interior design education.

3.2 The Method of Implementing the Curriculum Reform of Interior Furnishing Design

1) Literature method and research method: By consulting relevant materials, the current situation of the teaching methods of interior furnishing design courses is investigated, and the practicality, diversity and artistic characteristics of the teaching methods of interior furnishing design courses are found based on traditional teaching methods. , Try to use new teaching concepts and methods, carry out the understanding and theoretical analysis of interior design teaching methods, and systematically study the teaching methods of interior furnishing design courses.

2) Comparative method and inductive method: make comparisons on the basis of in-depth investigation and research, find out the connotation, difference, and integration characteristics of its teaching mode, integrate conventional teaching and project teaching, and improve classroom teaching. Practicality, depth, and effectiveness, summarizing and summarizing the promotion of social value of the reform and innovation research results of interior design classroom project teaching.

3.3 The specific implementation plan for the curriculum reform of interior furnishing design

Through the discussion of the teaching system of "Interior Furnishing Design Course Teaching", "Interior Furnishing Design Competition", and "Research, Learning, and Production", the students can try and achieve the effect of "applying what they have learned", and analyze theoretical teaching methods and design. The results of practical teaching methods, the fun of physical examination learning and the fun of design practice in learning and design practice, stimulate students' enthusiasm for learning and the initiative to participate in design practice, and solve the expected results and effects of the actual project in the research process of the subject (including results) Form, expected promotion, application scope, benefit area, etc.)

4. Conclusion

Through curriculum reform, the traditional drawing software in the training room is updated and new design software such as VR and AR can be added to realize the human-computer interaction to complete the virtual embodiment. The combination of VR, AR and interior furnishing design course teaching can stimulate students' interest in learning and Enthusiasm for learning.

Use convenient network technology to realize online school-enterprise cooperation, and always participate in the practical projects of enterprises to learn the advanced technology of enterprises so as to combine classroom teaching and social practice to achieve zero docking between classrooms and the market. Let you master VR technology for students, complete design practice in school, realize that students can do actual design without going out of school, and let students learn from passive learning to active learning and active learning through the form of receiving orders.

Under the background of the 5G era, we make full use of our mobile APP (such as indoor drawing software such as VR dressing up home) to make students love to complete classroom practice as much as they like to play mobile games, and instruct teachers to adjust the content and teaching methods of the classroom according to the specific problems of the students , The high-efficiency teaching mode solved in class greatly improves the teaching effect.

By making full use of the "smart Internet" in the 5G era, the teaching methods of interior furnishing design courses have been reformed and innovated through software and hardware technology such as VR and AR, greatly improving the teaching effect of interior furnishing design courses, mobilizing students' enthusiasm and autonomy, and improving To improve the employability of students, solve the problems that plagued design teachers, make full use of the school resources, and explore a set of more comprehensive teaching methods in the school that are consistent with the actual situation of the school.

Method: Establish and improve the school-enterprise cooperation mechanism of interior furnishing design courses, and realize the resource sharing platform of course teaching and online school-enterprise cooperation.

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References

- [1] Li Zhu. *Analysis of Humanistic Factors in the Design of Chinese Style Furnishings under the Background of National Culture*[J]. *The Frontiers of Society, Science and Technology*, 2021, 3(3): 17-24
- [2] ZHANG Jiang-Bo. *Application of green ecological design concept in interior design*[J]. *Environmental Engineering*, 2020, 38(10).
- [3] LIANG Yu-Ming. *Architectural decoration design based on the concept of green environmental protection*[J]. *Building structure*, 2020, 50(21).
- [4] XIAO Bing. *Visual Construction of Data Relations in Big Data Era*[J]. *Packaging Engineering*, 2016, 37(8): 5-8.
- [5] DOU Jin-hua, QIN Jing-yan. *Innovative Design of Product Service System Based on Multi-dimensional Data Visualization of Context Perception*[J]. *Packaging Engineering*, 2017, 38(2): 87-91.
- [6] HU Xiu-juan. *Media Environment of News Visualization in Big Data Era*[D]. Chongqing: Southwest University of Political Science and Law, 2015.
- [7] SONG Mei-na, CUI Dan-yang, HE Hai-hong, et al. *Design and Implementation of a General Data Visualization Model*[J]. *Computer Application and Software*. 2017(9): 38-42.