

The Curriculum Reform of Virtual Simulation for Displaying Design of Clothing Terminal Market

Jian Xiao ^{1*}, SiYu Guo¹, TengFei Zhou ¹

¹Dalian Polytechnic University

* Corresponding author. Email: 497524298@qq.com

ABSTRACT

This experimental course meets the needs of the development of China's clothing and apparel design industry, aims to cultivate innovative and applied display design talents with professional competence and social adaptability, and adheres to the teaching concept of "student-centric, problem-oriented, discipline integration, and innovative practice", and implements the principle of "combining virtual reality and supplementing reality with virtual reality".

Keywords: clothing, terminal market, virtual simulation

1. INTRODUCTION

The research on the curriculum reform of the virtual simulation for the clothing terminal market display design bases on the basic theoretical knowledge of design, selects the virtual simulation of the clothing retail terminal market scene, the establishment of the showcase display model, and the clothing and apparel display products through 3D modeling and other technologies. The virtual simulation which cultivates students' merchandise display combination ability, terminal market display design ability and retail terminal theme planning ability, so as to train students to obtain practical application ability from design theory to design practice.

2. THE NECESSITY OF VIRTUAL SIMULATION

Firstly, due to the limited space and single structure of the school laboratory, it is impossible to build a diversified clothing store according to the actual large-scale commercial environment, and it cannot meet the innovative and variability characteristics of display design. Secondly, the clothing and apparel products kept in the laboratory are outdated in style and insufficient in quantity. They are obsolete products, which do not meet the fashion characteristics, and cannot meet the needs of course teaching. ^[1] If a large number of procurement funds are invested in a large amount, the rapid elimination will bring continuous waste. Lastly, the

production process of display props and showcases is complicated and the cost is high; different display themes need to design a series of props with different materials, styles and styles. The actual production has a long teaching cycle and large investment, which is difficult for students to achieve by relying on their personal ability. On the other hand, reducing the design difficulty for cost saving will also seriously affect the teaching effect.

3. THE PRACTICALITY OF VIRTUAL SIMULATION

The virtual simulation experimental environment constructed by the experimental system fully realizes the experimental exploration of all the knowledge points of clothing and apparel exhibition design in the special commercial space of the clothing terminal market, which will need to be carried out in the actual large-scale commercial space or large-scale laboratory. The actual operation process and design results are visually presented in graphics and application scenarios, which are extremely observable and attractive. ^[2] It solves the difficulty in providing large-scale experimental space, and cannot afford the experimental funding problems caused by the purchase of large quantities of clothing and apparel exhibits and the production of exhibits and props. It effectively expands the depth and breadth of the experiment content, improves the learning effect of the detail processing part of the clothing display, and highlights the advantages of the virtual simulation experiment.

Relying on the virtual simulation teaching project, the experimental teaching method with independent exploration as the main form has been effectively expanded. By allowing students to independently complete the experimental processes such as store space browsing and selection, display cabinet adjustment, and exhibit placement, they can independently realize the grasp of the established design tasks. Meanwhile, combined with teacher ratings, students could see the experimental results intuitively, effectively mobilize students' enthusiasm and initiative to participate in experimental teaching, stimulate their interest and potential in learning, and promote the universal application of inquiry-based teaching methods. It could effectively cultivate and enhance the comprehensive ability and high-level thinking in solving complex problems.

4. THE ADVANCEMENT OF VIRTUAL SIMULATION

In this experiment, the research results of design, color, psychology, display design, commercial marketing and other multi-disciplinary and multi-specialties are comprehensively used to create a virtual scene of clothing terminal market. According to the arrangement of teaching content and learning objectives, construct a material library for virtual experiments with complete space and high simulation degree (including commercial space scenes, clothing and apparel products, showcase display racks, display props), which can also be combined with clothing fashion trends and brand design demand with the addition of experimental materials. It's like visiting reality and experiencing interaction, and we own the independent intellectual property rights of the software in the school.

5. THE TEACHING OBJECTIVES OF VIRTUAL SIMULATION

Dalian University of Technology, "Display Design" course, in 2020 won the first-class undergraduate online and offline hybrid course in Liaoning Province, is one of the main courses of clothing and apparel design. The "Virtual simulation of clothing terminal market display design" in the course was awarded the first-class undergraduate virtual simulation course in Liaoning Province in 2020. The course requires students to master the basic principles, design methods and practical processes of clothing and clothing market, and be able to complete the costumes of clothing and apparel design independently. The teaching objectives of this experiment are as follows.

It could effectively solve the shortage of the physical spatial area and types of the laboratory, build the latest large-scale commercial space in the virtual experimental

platform, and students could realize the experimental teaching operation of commercial space planning, store image building, theme display design, etc. in the process of virtual experiment.

Exemption from the time of store building and removing, funds, and human investment, simplify the teaching process, and the display design in virtual simulation allow students to repeat multiple experiments, explore different commercial space and their display effect;

On the virtual simulation platform, according to the positioning, students could give full play to their design creativity overall image and product sales demands. Display props, display cabinets, display shelves, etc. could be made and placed according to the design theme and scheme, which can not only deepen students' understanding and application of knowledge points, but also give full play to their innovative and creative ability;

Virtual simulation could provide unlimited clothing and apparel display goods. Students could make models according to the current popular styles, colors and materials. Technical support personnel can improve the models and replenish the virtual experiment material library, enrich the contents of the goods, meet the content of the display design popular and stylish requirements.^[3]

Students could build personal brand stores in a virtual business environment based on clothing brand positioning, overall image, and product sales appeal, thus improving their overall planning capabilities, cultivating analysis issues, solving problems, and continuing learning, summarizing and expressing, and innovate creativity.

6. THE PRINCIPLE OF VIRTUAL SIMULATION

According to the clothing brand marketing plan, from the space planning of the terminal market, the clothing and apparel matching, the display form composition, the store theme planning, the propiton, and commercial brand marketing, etc., the clothing terminal market is designed and training as follows:

According to the course experiment teaching content and students' ability to cultivate the target, this paper takes the young male, female fast fashion brand clothing as the experimental object, combining a variety of clothing style and different types of exhibition experiments. Therefore, students can have a complete and systematic understanding of the display design of male and female leisure fast fashion brand clothing terminal stores, and complete the display cabinet layout according to the situation of clothing terminal market,

the store space layout, the exhibition props layout and other virtual practical operation activities.

The display of clothing and apparel display should highlight the use of clothing, style, value, matching method and the overall effect of clothing image. At the same time, it should pay attention to the order of commodity display, highlight the physical attributes of clothing, such as style, colour, function, quality and price, and create a complete clothing brand image. According to the style of clothing brand, choose the colour, morphology and material of the showcase; According to the characteristics of clothing, display the product characteristics in the most reasonable way and reflect the consumer demand.^[4]

7. THE TEACHING METHOD OF VIRTUAL SIMULATION

According to the teaching content of the display design of clothing terminal market, taking students as the main body and stimulating students' learning interest and potential as the implementation standard of the experimental teaching method, the following methods are mainly adopted to carry out the experimental teaching:

Taking the fast fashion leisure brand clothing store as an object, surrounding the spatial layout of the store, clothing category and its combination characteristics, commodity configuration, display form, colour matching, etc., organize students to the clothing shopping malls, specialty stores, and further understand the relationship between retail terminal display design elements, methods and display effect, and design a complete display design scheme.

Using multimedia technology, this paper explains the 9 knowledge points used in detail, namely, commercial space planning, terminal market layout, basic commodity classification, product combination characteristics, commodity configuration planning, brand marketing theme, exhibition basic skills, design principles, and exhibition workflow to ensure that students have the mastery of basic knowledge, truly understand the connotation and processes of the display design of clothing brand stores, laying the foundation for the display design implementation.

By using the operation video in the virtual simulation system and the experimental operation demonstration of teachers, we could guide the students in the experimental process and methods, so that they could master the operation skills of the virtual simulation system, consolidate the theoretical knowledge of display design, and realize the display design of market.

The key elements of the retail terminal show design themes, selecting related typical cases, organizing

students to conduct review analysis, facilitating the activity of the classroom atmosphere. Students can also intuitively grasp the principles and knowledge points of clothing display design, deepen the understanding and judgment of display effect, and improve students' ability to analyse and solve problems.

Through the implementation of the virtual simulation experience, students could repeat the display design knowledge points and cases on the platform, but also explore the display design effects of comparative analysis of different types of combinations, different exhibition methods, different colour matching. Stimulating students self-learning and enthusiasm and helping students' cultivation of innovative and creative capabilities. Meanwhile, virtual simulation compensates for the lack of experimental teaching resources, which greatly expands experimental space, so that students could significantly improve learning efficiency, and the experimental teaching effects have also been effectively improved.

8. THE DESIGN IDEAS FOR VIRTUAL SIMULATION

To cultivate students' innovation, entrepreneurial capacity as the core, the project is constructed from a new experimental teaching mode of clothing talents cultivation, which is the mutual promotion of information technology and creative design, the combination of simulation experiment and enterprise real problems, through the experimental teaching of clothing terminal display design from the whole process of "retail terminal spatial planning - trade model - display exhibition design - store overall colour match".

The experimental teaching content created by the project centered on cultivating students' innovative spirit and practical ability. Using information technology, according to the actual process and methods of clothing terminal market display design, and implementing the experiment in the form of simulating or actual enterprise display design, which enriches and updates the experimental teaching content and experimental methods. In the virtual environment, it has broken through the traditional limited space, limited clothing categories, limited number of single items, and single display props. Different clothing or jewelry accessories categories could be considered comprehensively. Different displays ways and exhibition equipment, multiple factors such as different styles and graphic design, realistic store space, lighting effects and other simulation environments provide unlimited possibilities for creative design, which is more helpful to stimulate students' interest in learning, and make students' creative thinking comprehensive. By the way, it helps to cultivate talent teams such as creative

design and marketing, and better serve the transformation and upgrading of the apparel industry.

9. THE INNOVATION OF VIRTUAL SIMULATION TEACHING

With the goal of improving students' ability to analyse and solve problems, it adopts a teaching method that combines project-based teaching and inquiry-based learning to form an integrated experimental teaching method and means of "learning and doing".

Most of the traditional experimental teaching methods are taught by teachers including experimental principles, experimental content, experimental procedures, etc., and then demonstrate the use of equipment and equipment, after that, students follow the tasks assigned by the teacher, step by step to operate and complete the experiment, and finally submit the experimental report. There is only "learning" experience; this experiment breaks through the previous single teaching method, using online teaching knowledge, market research clothing market display design, "hands-in-hand" demonstration operation teaches the use of virtual simulation system and the general display design steps, and in the form of a project, actual combat committee sales terminal display design, as well as classroom case analysis and discussion combined experimental teaching methods. Integrating "learning and doing", uniting knowledge and action, which is conducive to mobilizing students' learning enthusiasm and autonomy, improve their independent research, project practical ability and comprehensive professional ability, as well as the ability to analyse and solve problems. ^[5]

10. THE VIRTUAL SIMULATION EVALUATION SYSTEM

With the purpose of fully reflecting the learning effect of students, the evaluation method that focuses on result evaluation is transformed into an evaluation method that combines process evaluation and result evaluation, and a full-process and all-round diversified evaluation and evaluation mechanism has been established.

In order to fully reflect the students' experimental process and learning results, an evaluation method that combines the whole process evaluation and the result evaluation is adopted. ^[6]The process evaluation includes the preview of knowledge points, retail terminal display design market research, virtual simulation system operation process, classroom questioning and discussion, summary display and oral presentations to examines the initiative and enthusiasm of students to participate in the course. The result evaluation includes the experimental report, the evaluation of the final effect

of the display design, the examination of the students' experimental ability, the comprehensive application ability of professional knowledge, and their level of innovation and creativity.

11. CONCLUSION

The virtual simulation of clothing terminal market display design not only solves the practical aspects of the brand retail terminal well, but also strictly completes each step according to the terminal display process. It is also easier to reveal the clothing brand positioning and consumer needs, brand terminal image, and commodity display design characteristics. The internal connection between the two provides students with a platform for independent innovation and creativity experiments. Therefore, the use of virtual simulation to carry out the experimental teaching content of clothing terminal market display design is an effective supplement to traditional teaching reforms and a beneficial extension of traditional teaching models. It promotes the innovation of experimental teaching content, promotes the reform of experimental teaching methods, also stimulates students' interest in independent learning, and improves the effect of experimental teaching. It is of great significance for cultivating top-notch fashion design talents with innovative, creative and entrepreneurial capabilities.

ACKNOWLEDGMENTS

National Social Science Foundation of China Art Program, 21BG127, 2021.

Major projects of National Social Science Foundation of China, 19ZDA183,2019.

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