

Research on Reform and Innovation of Digital Technology Design Teaching Mode

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Abstract: Teaching reform in colleges and universities needs to change the traditional main form of discipline-based structure, combine theoretical teaching with practical teaching, link school classroom teaching, practical base and local industry, and cultivate compound technical talents who can serve local economic development. For the major of digital technology design, after graduation, it is necessary to engage in relevant design industries, which has high technical requirements for talents. If students only have theoretical knowledge but no practical experience, it is difficult for them to have a competitive advantage. Based on the analysis of related concepts, this paper puts forward how to use the innovative teaching mode of combining production with learning to carry out digital technical design teaching, so as to cultivate innovative technical design talents and provide services for the development of local art design.

1 Digital technology design and industry-university innovation

1.1 Digital technology design

1.1.1 The meaning of digital technology design

Digital technology design has become a hot spot in the development of design specialty, and the teaching of digital technology design has realized the unity of form and content. The understanding of digital technology design concept is that, first of all, pursuing artistic sublimation and integration through specific art forms is something with humanistic artistic feelings, which has both perceptual beauty and rational beauty. Secondly, if you want to realize digital technology design, you must have a deep understanding and experience of art, be able to clearly recognize the uniqueness of art design, master the essence of art, and then reach a higher artistic realm. Design is a combination of art, expression, history and culture, etc. It is required to firmly grasp the relationship and mutual influence between art and culture in digital technology design. In addition, digital technology design is a bridge connecting art and culture, and a medium for artistic exploration, which can make different arts collide and intersect, thus producing new ideas, methods and arts. Cross-border is the foundation of design innovation, which requires very high ability and accomplishment of designers. Therefore, in the teaching of digital technology design, it is necessary to change the traditional teaching mode to really awaken students' desire for artistic exploration, and make the whole course teaching process full of artistic attraction, thus stimulating students' innovative consciousness and inspiration of artistic

creation.

1.1.2 Research on digital technology design teaching mode

There are two methods of digital technology design. One is that the subject field remains unchanged, which requires students to master the basic knowledge of digital technology design, establish the direction and goal of digital technology design research, and then actively absorb other artistic creation methods and characteristics in their study. In the teaching of digital technology design course, we should actively guide students to strengthen the research and study of related majors, such as music, painting, film and television, etc., and introduce artistic methods and characteristics into practical design by means of symbolism. The course of digital technology design must inspire students to find hidden deep-seated problems behind appearances, and explore the relationship between design and other art disciplines from multiple angles. This method requires students to study the relationship between cross-border themes and related elements of design and art from the aspects of visual expression, sensory experience and emotional psychology. The other is to express design achievements through other art forms. This method requires students to study the design and creation rules and means of other arts, and to use other art media to find the possibility of artistic innovation. Students are required to actively create videos, design brochures and posters when expressing and displaying design achievements, so as to display design achievements with novel artistic expressions. This method starts from a new angle, replaces the fixed traditional thinking, and is an extension of design. Through the teaching practice of digital technology design, students' design thinking and logic ability are enhanced,

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and their learning ability and expression ability are also improved, so that they can jump out of the traditional design perspective and start a new design journey.

1.1.3 Content and purpose of digital technology design teaching under the concept of industry-university innovation

Under the background of industry-university innovation, in order to cultivate compound technical talents with multi-disciplinary knowledge and multi-technical ability, students majoring in design should first fully understand the concept of digital technology design and the core of industry-university innovation, and realize the significance of industry-university innovation to discipline development and self-development. In design teaching, teachers should understand that design is interlinked, and the refinement of specialty is not to solidify the boundary, but to realize the cross-border of design and imagination, which every designer should have in the future. Therefore, in design teaching, it is required to encourage students to boldly cross the border in design, guide students to establish the idea of big design, absorb knowledge from other design and related art disciplines, break the shackles of traditional teaching mode, stimulate students' interest points, and make students realize the interest of design. Especially under the mode of industry-university innovation, the main purpose of digital technology design teaching is to cultivate students' thinking in images, creative thinking and divergent thinking, and to be able to carry out comprehensive design across different design categories, so as to make the design scheme more characteristic and personalized. In this mode, students can flexibly apply the knowledge of different design majors or disciplines and explore new paths in the design field. Secondly, it is the cross-border design style. That is to say, under the mode of industry-university innovation, the teaching of digital technology design has realized the collision between modernity and tradition, the interweaving of east and west, spanning different design languages, regions and styles, and creating artistic works spanning ancient and modern times and the integration of east and west. To achieve this goal, we need to draw nutrition from other disciplines and design ideas with digital technology in practice. In actual design teaching, we should make good use of cases, then refine the artistic and cultural connotation according to students' life experience, absorb different cultural spirit and style characteristics, and combine with industry to help students find the most suitable design language and method, and form a unique design scheme. Third, through innovative teaching, students can realize the cross-border application of materials. For example, taking the household industry as an example, the design and production of furniture have high requirements on materials. In order to achieve the best design effect and create a suitable home style, it is necessary to create beautiful form and texture with the best combination of materials, and combine wood, stone, metal, plastic and glass across borders to form a unique furniture product style. Finally, through industry-university innovation, students can be helped to realize cross-border

artistic modeling and function. After visiting the factory and doing practical work, the students found that the design and production of furniture are becoming more and more diversified and complex both in shape and function, and humanized design has become the key point to promote the innovative development of enterprises and the sustainable development of the household industry. After realizing this, in the future study, the students will design a scheme to meet the market demand in combination with the results of market investigation, and through digital technology design in shape and function, the function will be more humanized, which can meet different use requirements in shape and function.

1.2 Industry-university innovation

1.2.1 The meaning and characteristics of industry-university innovation

Industry-university innovation is an innovation of teaching mode in the field of education, that is, combining industry with teaching, and carrying out teaching design with the goal of cultivating compound technical talents. Students should not only learn professional knowledge in class, but also visit factories and enterprises under the leadership of teachers, so as to understand the industry trends and the actual requirements of enterprises for talents. At the same time, through the combination of production and learning teaching, it can also help students fully combine theoretical knowledge with practice, fully realize their own shortcomings, and learn and supplement according to the needs of the future talent market.

Generally speaking, the industry-university innovation is divorced from the traditional teaching idea and mode, which has a great influence on teaching organization, and makes the combination of subject teaching and practice, which is the requirement of industrial society after the interdisciplinary development and the complexity of scientific research. For schools, enterprises and other social organizations, in this increasingly complex and competitive social environment, it is necessary to strengthen the connection of self-inspection among organizations, to improve and break through the traditional teaching mode, so as to promote the sound development of teaching and help school education to the development of society.

1.2.2 The core and essence of industry-university innovation

The core or essence of industry-university innovation is "people-oriented", that is to say, from the perspective of students, to meet the objective needs of students, to make subject education close to humanitarianism, so as to cultivate talents with more personality and creativity. For the education of colleges and universities, it is necessary to take students as the center, harmoniously unify students' personal development needs and social development needs, link industrial development with educational innovation, and encourage students to study in communities, factories and enterprises, so as to cultivate

useful talents for social development.

1.3 Research on teaching mode of industry-university innovation

Under the teaching mode of industry-university innovation, it mainly combines industry with teaching, and promotes teaching reform and innovation based on practical education. The main forms of the innovation model of combining production with learning include the following: First, the on-campus production study and research model, that is, colleges and universities reach close cooperation with enterprises and factories closely related to majors according to the goal of talent training, providing a base for students' practice, and creating good material conditions for expanding schools. The second is a two-way consortium cooperation model, that is, relying on local leading industries to set up new specialties, and in turn relying on specialties to form local new industries. The third is the multi-directional consortium cooperation model. That is to say, colleges and universities choose enterprises with high degree of modernization that are the same as or similar to their own majors. On the one hand, they provide enterprises with relevant talents, on the other hand, they also provide students with internship opportunities. The fourth is the teaching mode of intermediary coordination and cooperation, that is, enterprise-oriented, in which enterprises set up relevant colleges according to their own industry types and set up targeted majors to train practical talents.

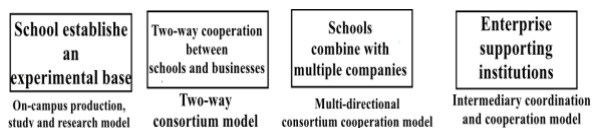


Figure 1: The interrelationship between the main bodies of industry, university and research

Under the teaching mode of industry-university innovation, the main functions include: firstly, realizing the sharing of resources, focusing on cultivating students' professional ability, adopting the concept of wide foundation and flexible modules in the teaching plan, and adding professional courses, elective courses and cross-professional courses on the basis of basic courses to ensure that they can learn the knowledge related to local industries while learning their own professional knowledge, and realize the knowledge fusion of cross-professional courses. Moreover, in this process, in the teaching environment of innovation and entrepreneurship, teachers and students of various departments and majors can share resources and improve the utilization rate of teaching resources. In the process of starting a business, students' rich knowledge is conducive to broadening their thinking, improving their judgment on the market, improving their ability of product development, interpersonal communication and innovative practice. In addition, under the innovative teaching mode of industry and university, mutual benefit and win-win are realized on the basis of industry, which not only promotes labor and employment, but also promotes the development of local

industries and provides higher-quality human resources for local economic construction.

2 Analysis of the teaching mode of digital technology design under the concept of industry-university innovation

2.1 Innovate teaching mode and adopt diversified teaching forms

Under the idea of industry-university innovation, the teaching reform of digital technology design first requires that digital technology design teaching should combine the related industries and teaching of digital technology design. For example, taking architectural design teaching as an example, organize students to visit excellent architectural design cases, encourage students to participate in architectural design art exhibitions and art performances, and arrange students to visit and study in related enterprises or construction sites. In this process, students' artistic horizons and perspectives have been broadened, and their artistic sensibility and cognition have been enhanced. At the same time, applying their own cross-border professional knowledge to actual design will help students truly understand their own shortcomings and re-examine the development of design industry. In addition, through effective independent learning and the combination of production, education and research, students constantly explore in the process of research, and complete a project design together with team members, which improves their sense of actual participation and makes them feel the charm of digital technology design.

2.2 Innovate teaching methods and adopt interdisciplinary teaching methods

The innovation of teaching means is mainly to integrate the teaching team, to cooperate with other art professionals and practical enterprises through multi-channels and multi-media, and to carry out diversified and interdisciplinary teaching of digital technology design, which makes up for the deficiencies in classroom teaching and provides students with multi-disciplinary knowledge. In this new teaching form, students can understand the development trend of the industry more clearly, and master the latest academic trends in the field of digital technology design and related art at home and abroad faster and better. In specific teaching, many experts, scholars and industry leaders with different academic backgrounds, different research directions and different industries can be hired to carry out cross-border teaching. These experts and scholars include artists, engineers, entrepreneurs, etc. They have different views on design, which can help students broaden their horizons, enable them to build a complete knowledge system in the field of art, solve technical problems in design, and realize the harmonious unity of technology and art.

2.3 Construct an international teaching exchange platform and innovate the way to show results

In the course, foreign scholars are introduced from time to time to carry out exchange activities and evaluate students' design assignments after the course. At the same time, using information technology to establish teaching exchange platform. On this platform, we can not only share resources, but also upload industry trends irregularly to help students better understand the development direction of design industry. At the same time, the entry of enterprises into the platform has narrowed the distance between students and future careers. In this environment, students naturally pay more attention to the practical and technical aspects of design, and realize the importance of digital technology design, which not only broadens their horizons, but also stimulates their enthusiasm for learning. For teachers, they can discuss with teachers from other schools, foreign teachers and even experts and scholars, and their teaching ideas are innovated. Finally, the platform can also display the design works of students and teachers, and make use of various display methods of design results such as video display to make students pay attention to the future. The sharing of resources, especially the sharing of social resources, provides students with a lot of learning materials and practical opportunities, and promotes the integration of teaching in and out of class.

3 Conclusion

To sum up, teaching reform and innovation is not only the requirement of teaching development in the new era, but also the goal of industry-university innovation. In the field of digital technology design, in order to let students know more about digital technology design knowledge, broaden their horizons and enhance their practical design operation ability, it is necessary to innovate the design teaching mode, change the inherent teaching formula, inspire students to better understand their own needs for the development of the design industry by participating in practical practice activities, and enable them to do what they like and are good at. In this process, students' design thinking is liberated, design styles and design raw materials are cross-border, and the design is better.

Acknowledgments

Fund project: scientific research project of Inner Mongolia Autonomous Region in 2020 "The Promoting Effect of Commercial Photography on the Sales of Ethnic Minority Commodities in Hulunbuir under the Mode of Industry-University-Research" (subject approval No.: NJSY20306).

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