

Research on Digital Innovation Path of University Sculpture Major

Zisen Meng

College of urban design, Liaoning university of media, Shenyang 110136, China

13700053498@163.com

Abstract. with the rapid development of China's market economy and the unprecedented prosperity of digital art, a wave of reform in the field of traditional sculpture and digital modeling has shouted out the slogan of new talent output of universities, and also opened the thinking of space and time of college sculpture major. In this era of information explosion, sculpture art has quickly integrated into the wave of digital reform, innovation leads the era, sculpture artists are using three-dimensional software, virtual space, information technology and other means to create a new visual feast. But in the visual effects under the influence of high technology, the aesthetic ability behind various technologies is also thought-provoking. As you can see, the creation of traditional sculpture style and ideological level associated with digital sculpture is obvious, digital sculpture on the one hand, have advancing frontier disciplines and practical, make the arts to its prospect to colleges and universities have a hope, on the other hand high and new technology and new media into sculpture teaching, also put forward higher requirements and challenges for students.

Keywords: digitalization; Sculpture; Undergraduate teaching; 3d modeling.

1. Introduction

Digital education is a model of course construction advocated by higher education in China. this paper, taking the sculpture major of urban design college of Liaoning university of media as an example, analyzes the teaching objectives, teaching methods and elements of traditional sculpture based on digital professional technology and multi-framework application software. In order to implement the college's guideline of "serving enterprises, focusing on practice, building industrial chain and improving economy", we have made an in-depth evaluation and analysis of sculpture art majors at home and abroad, hoping to give some enlightenment to the undergraduate construction and college curriculum system construction of our college. College after years of development and construction, the development of digital technology has made in various aspects, but its efficiency, the application effect, there is still a large gap compared with expectations for sculpture art specialty reach is limited, the traditional structure of primitive, so the information education resources present the trend of fragmentation, the phenomenon of redundant construction is more outstanding, lack of unity and compatibility, and set up the flow of knowledge and technology is relatively scattered, difficult to share information resources, network resources platform gradually evolved into a "resource island", "information island", "media", "fragments platform".

As we all know, nowadays is the age of computer popularization, and has infiltrated every field of art. Art teaching in China, especially the pure art major, has lagged behind the social development and market demand. Sculpture is a typical case of pure art discipline. Then, we have to face a fact. Under the background of Internet + era, how should the teaching of traditional sculpture adapt to the talent demand of the market and society?

2. Research Status and Purpose

Before that, first of all, we need to briefly understand what is digital technology. Digital technology, as a kind of cutting-edge science and technology accompanying with the computer, is mainly to process all kinds of information with the help of specific multimedia electronic devices. Most of the information processed by digital technology involves pictures, sounds, words and videos, etc. The birth of digital technology determines the continuation of traditional life,

fundamentally solves the loss of traditional technology, maximizes the restoration of intangible cultural heritage and improves national confidence.

Throughout the field of art at home and abroad, computer drawing has become a basic skill that today's artists should master, just as our professionals often talk about the skill. It's hard to imagine how an artist without a computer will survive in the future. Computer is equally important for students majoring in sculpture. We should know that, especially for graduates majoring in sculpture, they should not confine themselves to clay sculpture in the traditional sense in the face of the current difficult major matching rate. Because with the continuous development of The Times, our country's political and economic system reform at high speed, the market demand for large monumental sculpture in further smaller, the political functions of the sculpture itself represents the tide is turning to commercial aesthetic, this requires our professional teaching, aims at meeting the needs of contemporary society, the construction of the professional, create a new era with characteristics of digital sculpture innovation path.

Liaoning institute of media in heavy experiment strength training at the same time vigorously promote college digital process, we should take this opportunity to in the course of bold innovation, research and empirical road to build digital sculpture professional as a starting point, dedicated to the fulfillment of the multiplier effect of Internet + art education, the need to integrate and optimize the knowledge module, make them form a multi-level, multi-functional, interactive architecture service system, improve the service efficiency of 3 d software. Sculpture major should change the traditional course design mode and system construction scheme based on the network and digital information environment, and finally serve the market. Urban construction design institute to digital sculpture major, fundamentally to avoid repeating the development and course of the phenomenon such as waste of education resources, so as to gradually realize digital sculpture field and the organic integration of 3 d technology, effectively promote the benign development of the hospital digitization, and can be as a promotion, for the colleges and universities to provide practical solutions for the construction of professional art and to promote the development of digitalization of bachelor of art education in Liaoning province to provide the most comprehensive constructive guidelines.

3. The Development Dilemma of Sculpture Major

We found in the survey that with the development of digital technology and the Internet, people's demand for games on computers and mobile phones is increasing. It can be said that the game industry in China belongs to the chain of rapid growth, and it can also be said to be one of the industries with the best development prospects. Game companies are springing up all over the place, and excellent 3d games are also being developed one after another. We know that the most core department of a game company is the art department, but why can't the students from the sculpture department get in or get involved so little? Obviously the personal advantage is very obvious, but the result is surprising, which makes people think, what is the reason, leading to the shape shaping ability of the strongest professional, step into the mobile fortress of the game manufacturing industry.

On the contrary, in the current development of market economy, the throughput of digital talents is increasing day by day, but the curriculum setting of fine arts colleges fails to keep up with the market demand for talents. Digital industry developing rapidly, our professional adaptability is always slow step, a step slow step by step, in the teaching activities of the traditional sculpture, more the lack of software with specific flow of the course, the result is students will only shelf sculpture, software beginning ability is weak, as a direct result of JiuYe Road narrow, unable to follow up the phenomenon of time steps. The introduction of digital courses can just make up for the defects of traditional sculpture, such as 3DMax and Zbrush software, which can add significant advantages to sculpture major and relieve employment pressure. As a new professional means, digital sculpture can also be an independent professional discipline. In the future, it will have a broader space for development. Single for now, has been formed from the 3 d digital software to the

growth of such a complete 3 d digital industry chain structure, both film and TV, games, anime, these are inseparable from the support of digital technology, therefore, solve the current predicament of professional sculpture, digital technology, is the path to the innovation of choice.

4. Specific Application of Professional Digital Technology of Sculpture

Sculpture from a macro point of view of professional teaching, to build digital category fundamental purpose is to achieve the teaching effect, the varieties of one plus one is greater than the one in the actual teaching activities, through the study of multiple digital software, found that the proportion of software teaching and practice teaching assignment problem is very important, in the course system, to strengthen the construction of digital is beneficial to optimization of the organic links between the classes, the relevant number of course into modules, which targeted according to the requirements of the current partition ratio of theory and practice.

Liaoning institute of media is started construction in 2014 Internet + digital reform, five years, making the network foundation, network demonstration course, excellent course and other education curriculum resources construction work, with the continuous development of college, the existing technology has not fully meet the demand of digital construction, and in 2017 we based on "big data" and "financial media platform," began to add "3 x3" platform and architecture, the three main platform (Android, iOS and Windows), and three main architecture (local, mixing and mobile Web). With a view to the comprehensive and multi - Angle of the professional curriculum progress in-depth reform.

According to the talent training program and orientation of our college, the digital core course of sculpture major was firstly established. Based on this, according to the actual needs of students, the advantageous educational resources were concentrated, and the software level of the course was changed from flood irrigation to precise drip irrigation to build network demonstration class. The second is the rapid development of topology courses combined with 3D technology, which is also the first in the industry and the highest paid digital technology medium in the industry. According to the characteristics of students, the depth and breadth of digital construction are further explored. The school has refined the contents of traditional sculpture teaching in accordance with established teaching standards, and has developed a complete set of course modules. The specific contents are described as follows:

4.1 To Set up Professional Digitalization Oriented by Regional Economic and Social Development.

Sculpture related enterprises as the core, and its deep university-enterprise cooperation, focus on the regional economy, industrial development focus depth fusion, together with the enterprise virtual community construction characteristics, targeted for the society cultivate senior computer design staff and professional arts talent, satisfy the business enterprise practice and promoting regional economic growth.

4.2 Adjust the Curriculum of Sculpture Major.

Guided by the practical results of the course, and combined with the adjustment of the basic contents of digitalization and traditional sculpture, the teaching syllabus, teaching plan, lecture notes, schedule and practice report are redesigned.

4.3 Expand Practical Training and Experimental Teaching.

Digital school-running orientation and characteristic make the rapid development of our education, its applied personnel training characteristic determines the connection degree of enterprise and the social demand for talents, targeting position requirements and vocational skills training dual mode, and the cooperation enterprise combining the face-to-face training base, to develop practice teaching link, developed a series of course fully reflects the basis of the knowledge,

ability of adaptability, quality comprehensive, thus can greatly enhance the practical ability for students majoring in sculpture.

4.4 Promote the Process of Digital Education.

On the basis of the existing open online courses, five information courses are added on the multi-architecture platform, with 3d software technology as the core, the basic knowledge points are refined, and the teaching means are adjusted according to the synchronous feedback mechanism, so that it can better serve the construction of sculpture major.

5. The Importance of Introducing Digital Sculpture into the Teaching of Traditional Sculpture

With the addition of digital technology, sculpture specialty has the characteristics of virtuality, flexibility, efficiency and accuracy. Digital sculpture also has the multiple advantages of man-machine interaction, such as storage, extraction, accessibility, strong carving ability and convenience. At present, digital sculpture has formed a complete modeling chain from 3D digital software to 3D digital molding equipment. 3D printing technology is also showing the development trend and constantly breaking through new technical problems. In the future, it can be said that digital sculpture is based on digital modeling software. The application scope of 3d software is very wide, but there are three main categories of digital sculpture software: the first is the digital modeling software represented by ZBrush, whose main function is persistent curve sculpture form, the ability to make soft mold is very strong, and has the ability of ultra-high surface number processing. The second is 3DMax, Mudbox, 3d-coat and other software, which are highly praised by the industry. These software have professional digital functions and are highly effective due to the many command functions. Modeling software is getting more professional every year, and powerful digital sculpture capabilities are becoming available. The third is mainly relief design software, such as ArtCAM, JDPaint, etc., these software is more used in handicrafts, wood carving, iron art, carving, hollow-out and other fields, compared to the first two types of software more simple application scope, the use of users are relatively few, but very targeted.

Stand in the height of the school of professional construction, first we consider is "double to" supply and demand, the enterprise needs and student demand, after seeing the vast prospects and unlimited potential of digital sculpture, in order to promote our digital applied undergraduate education, formed to promote innovation, with high quality technology to promote industrial upgrading, we launched in urban design institute of open laboratories, actively respond to a nation "public entrepreneurship, peoples innovation" big development strategy, the rapid development of more than architecture specialty construction, optimization of the traditional arts, in order to better service to students.

Second, consult the national sculpture professional curriculum practice report, we have a choice of deepening the reform of the teaching outline, the teaching goal, means, content, evaluation standard, the proportion of software class, experiment practice put forward new requirements, such as the proportion of the construction of the digital technology as the leading, mobile WEB technology as auxiliary reaction mechanism, making PC port and port combination, set up basic knowledge of software delivery overpass, and stick to our "take the student as this, conveying talents for the enterprise" the characteristics of running a school policy, planning new add two off-campus practice base, hire game to suit the industry's top technical personnel, Enhance students' practical ability, software level, product vision and project experience.

6. The Inevitability of Combining Digital Teaching with Traditional Teaching

In today's teaching practice, learning for students majoring in sculpture is shouldn't be limited to the shelf sculpture, should be based on the traditional clay sculpture as root, important performance mainly by means of computer technology, to further combine digital technology and teaching,

teaching is learning, promote each other, only in this way can develop in line with the new era background, senior sculpture. To break down the traditional barriers, we have to start with the teachers. We have to be brave enough to go out and accept new things instead of standing still. Digital sculpture is a new computer art, but also a new technology, it combines digital modeling and traditional sculpture art, using computer technology to create sculpture works. Students' study of digital sculpture can not only promote effective communication between different subjects and majors, but also effectively expand the scope of application in the field of sculpture. As a new plastic art, digital sculpture, with its unique tool Settings and element symbols, connects the old and the new two shaping techniques and artistic aesthetics. Their artistic creation follows the same aesthetic law, which is not contradictory. Students majoring in sculpture have strong artistic modeling ability as well as artistic critical thinking ability. If they can skillfully use the computer to make pictures, they can be engaged in digital sculpture creation, an emerging industry in the market. Therefore, in the clay sculpture of traditional teaching, and improve the software supply, it is necessary to strengthen the students' basic skills at the same time, continue to pay attention to the body's ability to understand and master, there is only a very solid basic skills, to create outstanding works in 3 d software, makes the traditional teaching and emerging industries close 2 for one, can achieve twice the result with half the effort.

Students majoring in sculpture can quickly stand out in future job hunting after learning 3d digital software. Predictably, sculpture students learn a variety of computer software, which in turn contributes to a better understanding of body, spatial and anatomical relationships. With such rapid development in the future, they will no longer be confined to sculpture factories or artisans, but will be able to work in emerging industries related to digital art, such as topologists, modelers, art directors, special effects artists, and original painting designers. At present, animation or film companies increasingly favor new talents, because compared with other majors, students majoring in sculpture have relatively solid basic skills and strong sense of three-dimensional space. The most important thing is that they have a better understanding of the proportion and structure of human body, which is a great advantage. In addition to the film and animation industry, many large sculpture companies are also looking for new talents to use software to make digital sculptures in the field of sculpture. However, it is a pity that most students do not know how to use computer design drawings. To sum up, the 3 d software is introduced into the sculpture professional teaching, making digital sculpture teaching and traditional teaching in combination with each other, which can reflect the teaching diversity, is also in exercise students aesthetic, also can increase students' employment choice, with the improving of the students digital production ability, can produce in line with market needs high quality talents.

7. Conclusion

In the Internet era, educators need to analyze the data phenomenon rationally, which requires the understanding and understanding of 3d modeling in the college to become more and more critical. The traditional sculpture art will make people unconsciously fall into the decorative concept of visual space, and the symbolic elements are repeatedly appropriated. This kind of creative thinking will make the created objects lose the original life breath of the past sculptors, who tend to simplify their artistic language. College education in pursuit of popular and technology at the same time, the original modeling ability is the key, which requires our digital process for the current situation, the professional development of digital sculpture, also truthfully artist itself, the general public to embrace the new art form may still not have value, this requests us as a education institutions, take its essence to its dregs, after students grasp the connotation of the sculpture and technology, whether representational or abstract form, imagery, structure analysis is indispensable. Traditional clay sculpture is integrated with abstract space, scientific analysis and perceptual experience. Digital sculpture is the creation of the artists with the means and tools, it accelerated the forming efficiency, technology updates and qualitative breakthrough, but this is more of a way to expand, the current digital sculpture on the process of expanding sculpture ontology language, made the

discovery in the field of form, style, material, under the market orientation, embodies the aesthetic of multidimensional system and diversified aesthetic principle.

The digital development of sculpture, in addition to the innovation of the three-dimensional field, is more important to create virtual works with artistic value. Every era has its inherent prejudice, and the aesthetic consciousness that was once sought after may not be in sync with The Times, but may fall behind or surpass The Times. In such a noisy moment, artists are constantly creating novelty and pursuing self-satisfaction, pursuing visual effects or random interpretation of classics, and then rigidly reflecting in sculpture works. Classical art needs to go through the precipitation of The Times, so the study of classical art and the study of sculpture forms need to be carried out simultaneously. The carrier of digital sculpture is diverse and complex, and the artistic standard is diversified, which requires the teaching of the whole school to constantly improve at the cognitive level, which is particularly important for the updating of the language of sculpture. The mixing of original production methods has brought a great impact on the creation of modern sculpture. Artists are more interested in materials and techniques, and artistic aesthetics is grotesque, commercialized and special. With the continuous progress of digital technology of sculpture art, the artistic value is also improving.

Since Michelangelo's era, sculpture has been expanded in many fields, such as space, form, emotional expression and material manufacturing. However, it has been difficult to achieve breakthroughs in improving the quality of art, gradually ignoring the ontological life art of sculpture. Digital sculpture innovates the contemporary mission of traditional art and subverts people's cognition of sculpture language. With the vigorous development of market economy, the process of digitalization of college sculpture art is closely related to the future of students, and there is no end to teaching and research. This requires us to keep pace with The Times, constantly update teaching thinking, and never forget the original intention of the contemporary art revolution. At the same time, we should pay attention to the interference of various art theories, never forget the classic works, carry them forward in the new three-dimensional field, combine online and offline, and explore the foundation of sculpture art in the profound artistic tradition. The establishment of the new talent program also provides fresh blood for the promotion of regional economy. The combination of digital teaching mode in our college has played a key guiding role in improving the overall strength of sculpture major. Therefore, it can be seen that the construction of digital major has positive exploration and practical significance.

References

- [1]. Deng Wei, Wen Yang. the importance of the application of digital sculpture in sculpture professional teaching. *Sculpture*. Vol. 02 (2010) No. 3, p. 02-05.
- [2]. Yu Wei, Ji Fang. Comprehensive experimental study of digital sculpture based on zbrush. *Experimental technology and management*. Vol. 03 (2015) No. 5, p. 03-07.
- [3]. Shen Tao. On the impact and penetration of digital sculpture technology on traditional sculpture art. *Art Watch*. Vol. 02 (2013) No. 2, p. 01-04.