The Application of Computer Technology in Art Design

Xin TAO

He University, Shenyang, 110163, Liaoning

Abstract: After entering the twenty-first Century, computer technology has been greatly developed, applied in various fields gradually, and gained remarkable achievement. Computer technology not only is a project of great importance in China, but also cannot be ignored in the world. It has already attracted attention of numerous people, gradually integrated in daily life and closely related with it. Now how to apply it into more fields has been the main focus of our nation and also the topic we care about all the time. It is also an important project in our country to apply computer technology in art design in order to higher the art design quality. The purpose of this paper is to introduce people problems of the application of computer technology in art design, and find ways to promote cooperation and common development of them.

Art design is a highly comprehensive subject, involving society, culture, economy, market, science and technology and so on. Besides, it is a strong independence of artistic discipline, which includes production and design of arts and crafts, environmental design, graphic design, and multi-media design. In the final analysis, art design is the embodiment of the designer's own comprehensive quality.

Computer technology has wide-ranging contents, which can be roughly divided into computer systems technology, computer devices technology, computer components technology and computer assembly technology. Computer technology is one of the most applied technologies in China and is of great significance for the future development of our country.

1.Computer Technology and Art Design

Computer technology is obviously comprehensive, closely relating to electronic engineering, applied physics, mechanical engineering, mathematics and other disciplines. With the changing times, computer technology is developing rapidly and now has been used in various fields.

1. Systems technology

Computer technology itself is a complete system, whose systems technology is mainly divided into four aspects: system structure technology, system management technology, system maintenance technology and system application technology.

1.1 System structure technology

The system structure technology can improve the problem-solving efficiency and promote reasonable and orderly cost performance. The combination of these four subjects including system structure technology, computer hardware, solid body, and software covers

electrical engineering, microelectronic engineering, and theoretical computer science and so on.

1.2 System management technology

System management technology is completed through the operation. The main function of the operating system is the application of computer software and hardware, thereby enhancing the throughput capacity and problem-solving efficiency. It is easy to operate and conducive to improving the system reliability and reducing the computing cost.

1.3 System maintenance technology

System maintenance technology can automatically repair and diagnose the computer system. Auto-diagnosis is about examination and non-manual diagnosis for the system function. Functional examination procedure can make a comprehensive tidy-up for the micro-function of all the components within the computer system, and compare the test results to determine whether the components are normal by strict data, graphics or action retry test.

1.4 System application technology

The system application technology is the most widely used, which is most closely associated with programming automation and software engineering. Programming automation is the automated design of the computer program, which is the necessary condition for the computer to receive welcome. It also changes the early situation in which the computer relied on manual work to write programs for instructions so that much time and effort was wasted, errors were frequent and the reading and the mode changes were very difficult.

2. Art design

The art design itself has aesthetic and utilitarian function. Art design is a combination of material and spiritual function in the process of social development, and also the inevitable product of the social development. Art design is featured by independence, comprehensiveness, thought, mobility, serviceability, science and rationality.

2.1 Independence and comprehensiveness

The research content and the service object of art design are different from that of other traditional artistic disciplines. Art design involves many aspects such as society, culture, science, market and so on and its aesthetic function changes with these aspects. Art derives from life and art reflects life.

2.2 Thought and mobility

Art design is continuously developing in practice and is finally crated through the creation and practice. Whatever design it is, the first thing to do is to comprehend the concept of design, namely cultural background, geographical, historical and humanistic knowledge related to design.

2.3 Serviceability

Art design is to create a new way of life in order to achieve the goal of serving the society and allowing people to get more value. The ultimate goal of art design is simplicity, comfort, and efficiency, and to create better products, to change people's way of life, and to promote the development process.

2.4 Science and rationality

The means of art design is reasonable and orderly within the rigorous and scientific spirit level. Art design is not conducted blindly, but in a planned and purposeful way. It sums up different views and analyzes the pooled data so as to maximize the value of art design and benefit the people.

3. The Value Embodiment of Computer Technology Application in Art Design

The application of computer technology can play a significant role in the art design, thereby promoting the overall development of art design and giving full play to its true level. Such a success is achieved because the computer technology itself has a very high value and proper use of it can push art design forward.

3.1 Features of computer technology

Nowadays, all fields are inseparable from the application of computer technology, and its status becomes increasingly important. This phenomenon is mainly due to the features of computer technology itself. Application of computer technology in art design has the following features:

(1) The application of computer technology in art design will speed up the development process of art and design. The introduction of computer technology into the art design changes the manual activities such as graphic design, animation design, three-dimensional design, etc., which not only saves time and reduces the loss of labor, but also greatly improves the work efficiency of the art design.

(2) The application of computer technology prevents a lot of trouble for the previous manual art design and simplifies art and design. Most of the art design work is completed by inkjet machines, which is different from the previous complicated process and reduces the burden. By using computer technology, art design can be conducted in a quick and simple manner.

3.2 Advantages of computer technology

Computer technology has great advantages in art design. It makes art design more efficient, faster and more accurate and is a major innovation in the art design. Advantages of computer technology are embodied in the following aspects:

(1) It makes teaching more flexible and lively. The spirit of innovation in the art design is the main goal of cultivating students. The introduction of computer technology can effectively improve students' spirit of innovation, thus enhancing the level of art design. By using computer technology, the contents of art design can be more visually presented in front of students, thereby arousing students' interest. Computer technology can also make class full of more information. The teacher can impart knowledge to students by operating a computer, which will strengthen the interaction between the teacher and students, get rid of the traditional boring teaching methods, and provide a broader space for students' art creation. Different from the attending mode in the past, students' creative ability therefore is improved.

(2) It improves students' learning enthusiasm. The traditional teaching mode is passive learning for students, lack of initiative and interaction with the teacher in time, resulting in poor learning efficiency. The application of computer technology can make full use of multimedia technology, create new teaching mode, arouse students' enthusiasm, make the class more lively and flexible with sound effect, bring unlimited freshness to students, encourage students to learn further, and provide a pleasant environment for them to study art design.

(3) It improves the teaching efficiency of art design. When there was no application of computer technology in the art design, the main teaching tools include blackboard, teaching materials, chalk, etc. Using these teaching tools is time-consuming as well as inefficient. The application of computer technology just changes the way of teaching. The teacher imparts knowledge to students by simply moving the mouse. Besides, the traditional teaching method will be restricted by the pigment, paper and other factors, while these restrictions no longer exist by using computer technology. Drawing artistic work by using a computer can improve the efficiency and the teaching quality.

(4) It is conducive to promoting the further reform of China's modern education. The application of computer technology not only plays a good role in the domestic art design teaching, but also builds a bridge between Chinese art design and outstanding international art design through opening this new field. The strong function contained in computer technology greatly improves the teaching quality and level of art design, allows students to experience to see the international art design works, and draws lessons from foreign outstanding achievements so as to improve their own abilities. Students can also download learning materials through the computer technology, widen and deepen knowledge, enhance learning initiative and promote the reform of China's art design teaching.

3.3 Significance of computer technology

Computer technology plays an important role in the art design. The application of computer technology into the

art design is historically inevitable and to meet the needs of the times.

Computer technology and art design is the perfect combination of science and art. Computer technology can bring art designers more convenience, simplify the complex process, provide a new form of artistic expression for the designers, and create a channel between the art designer's conception and drawing works, so that the designers can present pictures conceived in the mind by drawing works, which further improves designers' working efficiency.

The rich expression contained in computer technology promotes the technological innovation in art design. Art designers use advanced computer technology to create new works. The application of computer technology provides a virtual environment for art designers, allowing them to produce works in such environment including design of color, light and some other effects, and finally create works with higher value after many attempts and efforts.

The application of the computer technology will make art design get better and better towards a more brilliant future with its value fully put to good use.

4. Computer technology application and development in art design

Computer technology has been applied in the Art and Design generally and effectively. It is a great undertaking for our country, which can promote the development of the art field.

4.1 The application of computer technology in art design

The application of computer technology in Art and Design falls into three aspects: 1. highly qualified teachers; 2. a series of changes of students based on new teaching methods; 3. art design diversity.

(1)Highly qualified teachers

As China values education very much, to develop high quality education is key to cultivate talents of our country. With the advent of the 21st century, science and technology has been greatly developed so that computer technology will inevitably be part of education reform as it is irreplaceable to our education.

Teachers are leaders of our education, as their responsibility is to guide students study effectively, and strive for the construction of our country. As for the development of art design, an excellent teaching team is indispensable. To introduce computer technology, teachers need to use their own methods which allow students accept and understand it, to analyze systematically the teaching materials and characteristics of each student, and to impart them knowledge with effective ways. At the same time, teachers should also have rich professional knowledge, improve themselves and guide students to learn art design.

(2) A series of changes of students based on new teaching methods

Since the computer technology has been introduced, the traditional teaching mode cannot be used any more. With the change of teaching form, students should also make preparation for it as the computer technology will bring them more enlightenment and inspiration. Computer technology enables students to enjoy larger scope of activities, to look up information they need, to create works of art, and to solve problems left by traditional teaching methods. Students can search for new knowledge and information by themselves, improve themselves and enhance their comprehensive quality by using computer technology.

(3) Art design diversity

Computer technology has laid good foundation for Art design diversity as it promotes the development of Art design in each aspect. It makes the tool of art design brush into mouse instead of a pen. And compared with a pen, a mouse is more flexible, easier to control, time-saving and effort-saving, and has better control over color debugging. Moreover, computer technology has also brought new thought and education methods for art design, and precious experience both for teachers and students, who can learn more advanced things through simple and acceptable methods. Computer technology provides students a good learning environment by creating them a virtual environment to show art design vividly.

4.2The application of computer technology in industrial design practice

Computer technology becomes more and more mature day after day, which enables the art design to enrich and develop greatly. The art field has been improved in certain degree, for example, computer technology nowadays is playing an important role in such areas like advertising design and production, industrial design, flash effects design and production, web pages design and editing and so on.

For example, computer technology can be applied in industrial design. In traditional industrial design, market research should be conducted firstly before making complete system design scheme. And then draw a manual sketch, which is a 3D sketch. After finishing, the sketch would be checked and modified repeatedly. Until the final confirmation is made, can industrial product renderings, three views be drawn, and models are made. There were too much cost of labors, materials and money in the traditional industrial design, as its complex designation wasted time and could not make sure the correctness. However, with the computer technology, the market research can be done through Word and Excel and can create diagrams later, which is much more accurate. At the same time, we can also integrate data available by Access to generate a database so that they can be found easily. Then we can create relative diagrams by the three-dimension software in the computer. It is easy and convenient. Personnel of industrial design can use computer technology to save time of designation and lower the cost. The application of such computer technology can not only promote industrial design development by realizing its goals, but also benefit our national economy.

Conclusions

In conclusion, the application of computer technology not only leads the art to a new level, but also benefits computer technology research in China a lot. As computer technology is the product of the development of the times, we should adapt ourselves to this trend, creating and developing it continuously in China and expanding its application to more fields in order to advance our science and technology, enhance our economic and technological strength, improve our national status and enhance our comprehensive national power.

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