Research on Classification and Development Trend of Animation under Digital Art

Linfeng Jiang, Weiwei Cai, Fangyu Liang, Yun Huang, Yongsui Gan

FZ Entertainment Co., Ltd., Nanning, China, 530200

Abstract: With the arrival of the new media era, all walks of life have gained good prospects for development, and the animation production field has thus gained sufficient momentum for development. In the current era, animation has attracted more people's attention with its unique artistic charm. The birth of digital art has further promoted the vigorous development of animation production. By forming a database of products, channels, marketing and sales, consolidating the technical foundation and building a complete animation classification platform, we can further promote the high-quality construction of China's animation production industry. In order to better adapt to the development needs of the new media digital art era, it is necessary to conduct research on its classification production and development trend, and create more high-quality animation production products.

Keywords: Digital art; New media era; Animation classification production; Development trend

1. Introduction

In recent years, the development level of social science and technology in China has been significantly improved. More and more advanced science and technology have been popularized in all aspects of people's lives, leading the transformation of spiritual civilization of us. In this social context, digital art, as a unique artistic way, provides a new direction for the development of all walks of life. In order to meet the basic needs of the masses of the people for media, we should further improve the animation design and production mode, create more excellent animation design and production products, comprehensively expand the scale of industry development, and grasp the development opportunities in the digital art era.

2. Research overview

In the new media era, Internet information technology is popularized in all aspects of people's lives and is the basic medium for people to obtain information. In this era, digital art has become a mainstream art development model, providing a new development idea for all walks of life. Objectively speaking, digital art is an art form or art process that is created or presented using digital technology and has a certain independent aesthetic value. It is based on information media, takes information and digital technology as the basic means of communication, and places creative activities on mobile communication and network media platforms, Generally, it can be divided into digital image art (including digital film, video and photography); Digital animation art (including 2D animation, 3D animation, digital special effects, etc.); Digital painting (including digital illustration, cartoon, etc.); Network art (including online games, etc.); Multimedia art (including interactive multimedia and multimedia dance drama); Virtual simulation (virtual reality, augmented reality, etc.); Digital design; Digital music and other types.

With the continuous development of digital art, certain changes have taken place in the field of animation design and production in China. The general public has increasingly high requirements for the quality of animation design and production products. It can be said that the booming digital art has further widened the development prospects of the animation production market and laid a good foundation for its development.

In view of the healthy and diversified development environment of the animation production market, building a global animation product data analysis platform has a very good guiding role for the future digital art animation content and script editing.

Global animation product data analysis and the birth of the storage and transportation center are of

great significance. First, it has created a broad creative space based on digital art. With the support of information technology, broaden the scope of animation design, and display the content of animation design in a more fluent way, so as to effectively break through the technical limitations and obtain a better reputation through innovative production. Second, it can effectively improve the creation efficiency. The traditional animation production method is relatively simple, and the production efficiency is very slow. At this stage, new animation processing software, such as 3DMax and Maya, can be introduced to save some creation time and greatly improve the creation efficiency with the support of high-power computers. Third, it can enrich the creation forms, effectively break through the information transmission barriers caused by the single picture and other ways, use the new animation design and production forms in the field of digital art, display the animation content in a rich way, promote the development of the story, and give the audience a richer viewing experience [1]. According to the construction experience, when building the storage and transportation center, the database management system, which is based on the 4.2 version PostgreSQL core technology, can well integrate the four database segments of product, channel, marketing and sale. The information feedback from the analysis of the four data platforms can help designers identify the regional markets where products are suitable for launch, accurately control the market situation of competitive products, and form a complete platform construction logic, which can help the development of digital art.

After entering the 21st century, new technologies emerge in endlessly, the Internet is more popular, mobile Internet is booming, new digital art software is more abundant, big data and cloud computing provide support for digital art, and make virtual reality, artificial intelligence practical, and the Internet of Things gradually take shape. All these have created favorable conditions for the diversification of digital art forms of expression and the expansion of the dissemination scope.

3. Animation Classification Production under the Background of Digital Art

3.1 Pictorial emoticons animation

In the 1990s, digital art continued to be integrated while it was popularized, and the performance ability of digital art continued to be enhanced. With the increasingly lifelike special effects of films, and the vigorous development of digital film and online game industries, smart phones have become an indispensable communication tool in people's daily life in recent years. With the rise and popularity of more and more social software, a large number of pictorial emoticon animations were born. It gives artists unprecedented creative freedom, allowing them to cut and paste in moving images to create visual collages. Digital art and traditional media continue to integrate, becoming one of the widely accepted art categories. The public also participate in the dissemination and creation of digital art. Through the integration of animation technology, the effective combination and continuous playing of relevant pictures can be achieved, which can more vividly show people's inner feelings. The production of pictorial emoticons animation is relatively simple, and the number of animation files is relatively small, which has a great development prospect in today's era. It can be said that the picture expression animation in the instant messaging era has a very high status, is a typical product of the digital art era, and will gradually evolve into an important component of the animation industry.

3.2 3D simulation animation

In the process of traditional animation production, puppet and mud puppet displacement photography is generally used to present three-dimensional animation content. Even in today's era, this unique way of art production also has a very important position. With the vigorous development of digital art, more and more information technology and network technology have been applied to the field of animation production. 3D animation has gradually become an important form of expression in the field of animation in the new era. Before applying computer software for animation production, relevant scenes should be designed according to the required animation content specifications, and the role modeling and story situation should be set properly. The animation simulation should be carried out in a standardized way, and the screen content should be adjusted by the audience's perspective to form a high-quality and complete animation work.

3.3 Network application animation

This kind of animation works has good interactivity. It is a kind of plane animation works, which can change the broadcast state and interface in real time under the control of media. In the era of digital art,

network applied animation has become a mainstream development trend. With the continuous updating and progress of animation creation technology in the digital art age, various forms of interactive animation are presented in the public's view. Network application animation is generally reflected in the field of game animation. For example, the game APP on the smartphone side contains a large number of network application animation, which is also very common in online advertising [2]. Its main audience is mainly animation fans and young people. With the increase of the number of Internet users, the age of the audience has gradually increased.

4. Animation Production Technology under the Background of Digital Art

4.1 Professional 2D animation production

2D animation production technology is one of the most critical animation production technologies. In the digital art era, the extensive application and promotion of TOONZ, ANIMO, SimpleSVG and other software provide a new idea for professional 2D animation production. In the actual creation process, it is first necessary to define the design and production thinking, accurately position the animation characters, and improve the modeling according to their characteristics [3]. Secondly, the design of animation scenes should be well implemented, and the design methods should be adjusted according to the character's environment and plot changes. In addition, it is necessary to improve the sub camera processing of the screen, use montage creation techniques, and grasp the expression position and action of the relevant characters. Finally, we need to improve the split shot design draft to ensure the animation playback effect. When entering the specific creation stage, it is necessary to draw the animation background scientifically to form colorful drawings. The original painter will be responsible for the design of props, characters, animation and other elements that need to be used to depict the key moments of the characters' actions. The continuity of the figures' movements should be maintained by creating intermediate paintings, and then the line drawing design should be carried out and colored lines should be inserted. In recent years, animation production companies have been adept at using big data analysis platforms to avoid existing similar roles and manufacturer models when making products, making the given role themes more unique, and avoiding the occurrence of twin faces or similar backgrounds.

4.2 3D technology animation

A complete 3D animation production needs to include many links. Relevant personnel need to scientifically apply computer technology to improve the animation design planning, and do a good job in shaping and designing animation scenes, story plots and characters. During the clip production, it is necessary to create a virtual 3D space by applying 3D design technology, generate physical modeling, and ensure that animated characters can move in the 3D space. The animation display effect should be optimized by adding environment and light effects, and the complete animation should be generated by using the composite sequence. 3DMax, World Builder, MAYA and other 3D animation production software can be introduced in the design and creation process to assist in animation design and production.

5. The Development Trend of Animation Production under the Background of Digital Art

5.1 Animation production industry is booming

In modern society, the extensive development of information and digital technology has further promoted the communication channels of animation products. At present, after the production of animation products is completed, new media and other platforms are usually selected for channel distribution and content release, making full use of their strong interactivity to optimize the effect of animation communication and effectively reduce the costs incurred in this process. At the same time, new media channels can also be used as an important platform for testing animation products, and digital computer technology can be introduced to build a complete network testing process. According to the feedback needs of the actual audience of animation works, animation creation schemes can be constantly improved. Relevant individuals and enterprises can also standardize the design draft of animation derivatives through digital and information network technology to reduce post production and development risks [4].

5.2 The status of content providers will be significantly improved

With the extensive development of digital art, channel suppliers play an important role in the communication and creation of animation products, occupying the most critical copyright value chain. After the animation products are produced and sold to the market, such suppliers are responsible for fee collection, user management and other work. They can obtain considerable income, but the content providers are in a lower position in the value chain. Their efforts are not proportional to the returns, leading to a significant reduction in their creative enthusiasm, and even some low-quality digital animation products. In order to ensure the sufficiency of animation content materials and provide better animation products for the audience, it is necessary to clarify the importance of content suppliers and constantly improve their status. In the era of channel oriented, channel suppliers introduced various payment methods, which led to an increase in users' viewing costs and raised higher requirements for the quality of animation products. Under the background of digital art, the competitiveness of all kinds of animation products is becoming increasingly fierce. In order to further guarantee the creation effect, the status of content suppliers should be effectively improved, and the content-oriented value chain model should be transformed.

The author believes that if we can use big data analysis tools to give creative direction and momentum in the creative process, it will not only reduce the cost of creative content suppliers, but also reduce the time for animation production.

5.3 Integration and development of 2D animation and 3D animation

In the production of animation products, 3D and 2D production technology has unique advantages and disadvantages, and is an important technical means in the process of animation production. Through the application of different creation methods, we can obtain a differentiated visual experience and have a certain impact on the scene expression. Comprehensive analysis shows that 3D animation creation technology has higher creation advantages. However, if the humor, exaggeration and vividness of characters are considered, 2D animation still has certain advantages. Based on this, in the development process of animation production in the future, in order to better grasp the development opportunities of digital art, it is necessary to integrate two-dimensional and three-dimensional animation creation technologies to develop synchronously and learn from each other.

Specifically, first of all, 3D scenes can be regarded as important elements in animation production, and some 2D animations can be integrated to show unique visual effects. The creator can match some two-dimensional characters in the three-dimensional scene to further highlight the three-dimensional sense of space. At the same time, some substantive elements can also be interspersed between 2D and 3D animation to guide, so as to enhance the richness of the screen with 3D elements and deepen the spiritual charm of the animated characters with 2D elements. In addition, 3D technology can also be used to show 2D animation effects, such as 3D technology to show traditional Chinese ink painting, giving it strong vitality and expressiveness [5]. For example, the animation Demi-Human broadcast in Japan in 2016 is an excellent work of 3DCG converting two-dimensional animation effects. It highlights the sense of space of three-dimensional animation, and reflects the vitality of two-dimensional technology through the painting of two-dimensional characters.

In a word, as two important creation technologies in animation creation, both two-dimensional technology and three-dimensional technology have unique application value and advantages. By promoting the efficient integration of the two, it can help the animation industry grasp the development opportunities in the new era, effectively broaden the audience, create rich forms and colorful animation works for the audience, and form a clearer animation theme. This creation method can effectively meet the actual needs of the audience for animation products, better highlight the basic characteristics of digital art, cater to the overall development trend of the new media era, and promote the innovative development of animation production. The integration of 3D and 2D creation technology can make the entire animation industry more powerful, meet the aesthetic needs of the public, and create more high-quality works.

5.4 Integration of global animation resources

Since the 1960s, high-quality animation works around the world have shown explosive growth. China's animation film market is large and complex, the hot spots of content consumption change rapidly, and the lack of content creation is the biggest factor restricting the further development of China's animation film works at this stage. It is inevitable that creativity and thinking among animation works

will be integrated, borrowed and even overlapped. Therefore, in order to improve the originality of animation, animation production companies will establish some basic databases related to global animation products and channels, which is an inevitable development trend and can realize peer data sharing.

For example, the "Global Animation Creation Data Platform" produced by Nanning FZ ENTERTAINMENT CO., LTD. mainly provides services for all levels of markets and businesses of independent animation products. The basic data of global animation product channel basic database is formed by combining MIFA market transaction data of French Annecy Animation Film Festival, animation production data of Peak Communication "DreamWorks Animation SKG", "China Live Channel" China Film and Television Zone and other data sources. The secondary analysis of peak communication data can effectively provide effective data support for digital art animation products. It can solve the problems of the lack of basic data such as the data of global animation products are not centralized, and the data of global channels are lacking. It can help enterprises to analyze the creation of animation works, the production management of animation works, and the distribution of animation works, improve the efficiency of animation creation, and improve the domestic animation product line.

6. Conclusion

To sum up, if the field of animation design and production in the new era wants to achieve efficient development, it must cater to the trend of digital art in the new media era. Through the establishment of the big data analysis platform, it can achieve selective editing of content, and integrate the characteristics of the times to optimize the development model, so as to create more high-quality animation works. With the extensive development of digital art, the animation design and production industry has shown a stronger vitality, and its development momentum is very good. A good grasp of the content of animation classification production and a full understanding of its future development trend can better promote the reform and construction of animation production industry, solve various problems arising from the current animation art creation, and promote the healthy development of animation production.

References

[1] Liu Huijun. Analysis on the Classification and Development Trend of Animation under the New Media Art [J]. Culture Industry, 2022(12):1-3.

[2] Kong Xingdi. Analysis of the Development of Animation Design and Production under the Background of New Media Art [J]. Digital Communication World, 2021(06):244-245.

[3] Lai Yuhuang. Research on Artistic Expression of Animation Character Modeling Design under New Media Environment [J]. Art Research, 2020(03):124-128.

[4] Dai Yuhang. The Influence of Digital Media Art on Animation Design [J]. Chinese Handicraft, 2021(04):78-79.

[5] Zhao Xian, Shen Lin. Technology, Art and Academia: An Overview of Sound Creation and Theoretical Development of Chinese Animated Films (1935-2020) [J]. Movie Review, 2021(01):13-18.