



Research on Stage Innovation Design in Fashion Dynamic Display Based on Digital Media Technology

Qianwen Li and Min Yin(✉)

Wuhan Institute of Design and Sciences, Wuhan, China
sylvialeee0212@163.com

Abstract. The current technological innovation provides better conditions for the design of the stage and brings more effects in the dynamic display of clothing, so that designers can play their own ability to create a richer stage. Through the elaboration of digital media technology, analyzing the advantages of digital media technology, introducing its application in the dynamic display of clothing, and combined with its development trend, the design effect of the clothing stage can be significantly enhanced and can present a better effect.

Keywords: Digital media technology · Clothing dynamic display · Stage design

1 Introduction

With the development of technology, people's aesthetic concept has changed, and the application of digital media technology can increase the display form of art, which provides more conditions for the creators, and can make their imagined content into reality. In clothing design, the integration of computer technology innovates the means of design, among which the dynamic display effect of clothing is also strengthened. Because the use of modern technology makes the combination of clothing and stage art bring better visual effect, which provides people with a feeling of beauty. Therefore, the application of digital media technology in clothing and stage design is analyzed.

2 The Concept of Digital Media Technology

As a modern information technology that can collect, integrate and process digital information such as text and images, digital media technology is taking more and more forms in the current applications, including digital film and television, digital games and other content. Digital media technology has been applied in a variety of fields, including handicraft exhibition, architectural image design, animation production, etc., providing good support for various industries. Due to the great application potential of digital media technology, it has attracted social attention and can be gradually applied to more fields, accelerating the development speed of different industries.

© The Author(s) 2023

B. Majoul et al. (Eds.): ICLAHD 2022, ASSEHR 726, pp. 817–822, 2023.

https://doi.org/10.2991/978-2-494069-97-8_103

3 Advantages of the Application of Digital Media Technology

3.1 Reduce the Investment in Stage Art Resources

As the traditional stage art background uses the physical background setting mode, the background of the background version and the T-shaped stage are generally used in the dynamic display of the clothing. Current clothing performance stage background design become more complex, performance venue will be combined with performance theme to establish a unique scene, such as in a famous brand clothing conference, designer will stage design as a supermarket, on the stage need to spend four minutes to complete the show, this stage form can make the audience better into it, but the stage design and establish need to spend more resources, the cost is higher, will also cause a waste of resources. Using digital media technology is available Make the stage is not restricted by the site, only need to make multimedia video and audio-video materials in advance, to make it easy to save. Through the effective application of digital technology, the performance effect can be adjusted. When the effect cannot meet the requirements, the software can be used to edit and adjust, simplify the whole process, and reduce the investment of resources to avoid the problem of waste impact on resources [1].

3.2 Fully Express the Designer's Ideas

The application of digital media technology can make the establishment of visual space smoothly realized, but also can make the designers have the corresponding channels to express their feelings, to show the audience their own creative content, including the designer's will and thought, using the form of symbols to meet people's aesthetic needs, to bring people a better experience. Digital media technology can be used to establish the corresponding visual space, so that the form of the stage is innovated, and can also be raised to the level of artistic thought expression, and strengthen the effect of artistic presentation. With the support of technology, the thoughts and emotions of clothing designers can be integrated with the stage, and infiltrated into various elements to express the designer Emotional attitudes, these emotions are restored in the form of images, which can bring a deeper impression to the audience.

3.3 To Upgrade the Audience's Visual Experience

At present, people have put forward higher requirements for visual experience. In order to meet people's needs, the application of digital media technology can create virtual scenes, bring people an immersive experience, enrich the visual language, and form a new aesthetic form. Digital media technology can integrate sound and light into the clothing display stage, so that the shape of the stage is creative, strengthen the appeal of the stage space, and can make the audience put into it faster, and get a good feeling. For example, using virtual reality technology can create a virtualized space, allowing people to get a real experience in hearing, vision, etc., which can make The audience can feel the charm of the stage better in the situation [2].

4 Application of Digital Media Technology in Stage Art Design

The application of digital media technology can bring help to the clothing stage design, improve the artistic presentation effect, meet the stage design needs of different needs, show different scenarios, create the corresponding atmosphere, and provide good conditions for the designers. Mainly include the following several technical contents.

4.1 Application of LED Technology

The application of LED technology can make the stage background have diversified and strengthen the fluency of switching. The computer system can be used to realize the control of LED, so that the background can be quickly switched according to the theme of the stage and show the dynamic background. Through the application of LED technology, the transformation of the background can be more flexible, convenient for personnel to control, and can meet the stage design needs of different scenes.

4.2 3D Giant Projection Technology

3D giant projection is an important content of digital media technology. When it is applied in the clothing stage, the image can be projected to the building by setting up the projector. Because the three-dimensional outline of the building can make the audience produce a three-dimensional image effect of the vision, which strengthens its sensory experience, and can bring better results.

4.3 The Application of Holographic Image Technology

In the past, projection imaging was displayed by the latitude and longitude of light and shadow distribution, which was impossible to collect object reflection light sources, and it was difficult to show the situation after the image. The application of holographic image technology can achieve a good display effect, and its application to the clothing stage can create a better visual space. Hologram technology can present a three-dimensional effect without requiring the display equipment, and can also adjust the projection degree according to the situation of the site. This technology enables the audience to watch the stage in a good atmosphere, thus realizing the interaction between the audience and the stage [3].

4.4 Application of Light and Shadow Structure Technology

The application of light and shadow structure technology can improve the stage presentation effect. Due to the certain requirements for music and lighting in the stage design, the cooperation of props with the help of digital media technology can make the stage performance effect show more three-dimensional characteristics and bring an immersive experience to the audience.

5 Digital Innovation Expression Form of the Stage in the Clothing Dynamic Display

5.1 Reflect the Time and Space of Clothing Display

With the support of technology, clothing dynamic display has the characteristics of time and space. Through the reasonable arrangement of time, the stage clothing display can have a better effect, bring rich experience to the audience, and avoid bringing poor experience to the audience. Generally, the stage design time can be controlled within the appropriate range to ensure the effect of the stage presentation, and can also bring a satisfactory experience to the audience [4]. Using digital technology to design the stage can solve the problem of stage time, and prolong the appreciation time in the stage display, but actually the time does not change. By presenting a diverse stage can bring the audience under multiple sensory experiences. Feel that the time is extended and drawn to the stage. From the perspective of space, clothing dynamic display stage with the design can present a wonderful effect, the stage layout has a direct effect on the artistic effect, stage can reflect the performance has space, make people to create the simulation scene get new experience, association, strengthen the appeal of the stage, so can make the clothing stage effect.

5.2 Create a Rich Stage Background

Using digital technology can create a rich visual space, through the arrangement of technology and lighting, make it into the design scene, combined with the characteristics of the stage performance adjustment, can make the stage background has vivid characteristics, avoid monotonous stage background, make the stage more artistic conception, presents a wonderful picture. There is no language in the dynamic display of clothing, but it contains more language communication content. Through the creation of the scene can bring better presentation effect through three-dimensional sense. In general, the stage structure is the background board and T-shaped stage. After the application of digital technology, the designers can effectively integrate vision and hearing, With the help of technology to create more artistic scenes, to create a virtual scene for people. For example, the digital technology of a costume stage design is used to present the scene of blooming flowers, which makes the audience feel their experience integrated into the sea of flowers, which makes the stage design bring people more immersive experience.

5.3 Strengthen the Stage Sound and Light Performance Effect

The atmosphere of the stage has a great impact on the design effect, designers need to grasp the atmosphere of the stage, can use digital technology to control the music and lighting, to convey their emotions to the audience, so that the audience's emotions are mobilized, can make the audience can have a deeper impression. Designers can use digital lighting and patterns to project it on the stage clothing, which can innovate the presentation effect of the clothing and bring a good experience to the audience.

6 Development Trend of Stage Digital Application in Clothing Dynamic Display

6.1 Stage Digital Technology Forms Are Diversified

In the stage design, the application of digital technology provides more possibilities for the design, and creates an artistic space for people, so that it can get a good feeling. In the process of clothing display, digital technology can not only strengthen the visual effect of the stage, but also cooperate to achieve the innovation of the stage with other elements, such as audio technology. Through the reasonable application of different technologies, multiple elements on the stage can be integrated to strengthen the artistic effect of the stage. For example, the combination of holographic projection technology and naked eye 3D technology can enhance the visual effect, bringing people a more dynamic and continuous picture effect, which can make the stage design. The needs of different forms are met to promote the development of stage design art [5].

6.2 The Interaction Effect Between the Audience and the Stage Was Strengthened

The application of digital technology in clothing display can realize more functions, in the interactive direction, and make this characteristic more and more significant, through the application of technology can make the audience between the heart and clothing show, inspired people's thoughts and emotions, can also make appreciation form of communication, the audience can evaluate, according to their own views to express feelings, real can participate in the design, make the design form of comprehensive innovation.

6.3 Virtual Portrait Use is Achieved

Virtual portrait can realize the presentation of virtual model in the process of clothing display, and bring better visual experience to the audience in the design of virtual model characters. For example, in the design, the virtual role is presented behind the model display, creating a dreamlike scene by disappearing or changing, so that the audience can experience the charm of the technological stage [6].

6.4 Clothing Presentation is not Made by Hand

Intelligent clothing is a form presented under the application of digital technology. Clothing patterns can be printed in 3D [7]. You do not need real people to try on to enjoy the presentation effect of clothing, nor do not need to be handmade. The use of digital technology can make up for the manual problems, so that designers can play their own inspiration to create, provide the audience with a good artistic aesthetic experience, and enhance the presentation effect of the stage. Therefore, through the rational application of digital technology, the form of clothing presentation can be innovated to achieve the goal of stage design.

7 Conclusions

Clothing stage design can make people have more understanding of clothing art, feeling of clothing art, in order to strengthen the effect of design, through the application of digital media technology to improve design, in the design, using LED technology, 3D giant projection technology, holographic image technology to achieve innovation, make the form of design more rich, bring people new experience. It can also reflect the time and space of the clothing display, create a rich stage background, strengthen the stage sound and light performance effect, and bring help to the design of the stage.

References

1. Yu Hongting. Application Research on Stage Digital Innovative Design Based on Fashion Dynamic Display [D]. Northeastern Electric Power University, 2018.
2. Chen Lifang. The Combination of Virtual Design Software and Clothing Printing Technology [J]. Theatre House, 2019 (32): 110.
3. Zhang Hui, Chen Juanfen. The Application of Holographic Projection Technology in Virtual Clothing Display [J]. International Textile Guide, 2020, 48 (11): 55–59.
4. Tang Jingqi. Exploring the practical significance of clothing dynamic display [J]. Textile Report, 2020, 39 (07): 93–94.
5. Lu Zhenbang. 3 D Virtual Clothing Display [J]. Shanghai Textile Technology, 2020, 48 (12): 104.
6. Zhang Yuxiang. Experimental Inquiry on Clothing Virtual Product Design Based on Virtual Reality Technology [J]. Tomorrow fashion, 2021 (07): 146–147.
7. Yang Shuai. Application of 3D clothing technology software in today's clothing industry [J]. Shandong Textile economy, 2020 (10): 25–27.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

