On the Application of Computer Combined with Multimedia Technology in Post-production of Film and Television

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Abstract. Since entering the 21st century, with the rapid development of economy, the people's material living standard has been improved, the level of spiritual civilization has been improved, and the demand for leisure and entertainment has become more and more diversified, thus the demand for film and television works has become higher and higher. The relationship between film and television works and computer multimedia works is becoming more and more close. Computer multimedia technology has even become its core technology and has been widely used in film and television works, especially in post-production. The application of computer combined with multimedia technology has brought a good development opportunity for film and television post-production, met the requirements of film and television works in the process of post-production, and improved the quality and presentation effect of film and television works. Thus, the production efficiency of film and television works has been improved. The computer combines the multimedia technology to realize the simplification and flexibility of the editing operation, which makes the editing time greatly shortened, and even if the error occurs in the editing process, it can be scientifically restored at any time. What role does computer multimedia technology play in film and television works and how to further use multimedia technology to make the film and television culture develop at a higher level is a topic that has attracted the attention of the industry. This paper briefly discusses the role and methods of computer multimedia technology in film and television post-production\footnote{1}.

Keywords: Multimedia Technology; Post-Production Film, Applied Analysis.

1. Problems in the Post-production of Traditional Film and Television

1.1. The production of traditional film and television works is tedious

According to the content of the film clip will be pre-recorded material into a continuous picture. In the process of post-production, film and television works need to adopt such a combination editing method, mainly according to the sequence of story development required by the works, the separated image materials are preliminarily edited, connected in series, and then inserted and edited. Replace content that needs to be modified\footnote{2}. After these work is completed, it is not possible to delete or...
extend some of the content. If you want to do this, you need to delete all edited content and edit it again. The problems in the traditional post-editing show that the process of changing the length of the work is very complex and requires a lot of time and manpower. Traditional TV editing is done on the editing machine. The editing machine usually consists of a video player and a video recorder. The editor selects a suitable piece of material through the video player, records it on the tape in the video recorder, and looks for the next shot. In addition, the advanced editing machine also has a strong special effects, can make a variety of overlapping portraits. Can adjust the color of the screen, but also can make subtitles and so on. But because the tape recording is sequential, you can't insert a lens between the existing images or delete a lens unless you rerecord all the later images. So this kind of editing is called linear editing, which brings a lot of restrictions to the editors. Although the traditional editing methods have their own characteristics, they all have great limitations, which greatly reduces the creativity of the editors. And make valuable time wasted in the tedious operation process. And even after several modifications, the content of the film is gradually improving, and the sound quality and picture will certainly appear a certain attenuation, so it is not worth losing.

1.2. Late editing of film and television works is excessively dependent on editing
In the process of traditional film and television post-production, the editing work of the film is that the single shooting material will be sent for editing and the shooting material can not be increased. The traditional production method mainly depends on the personal level of the editor. However, the level of post-production personnel is uneven, in the post-editing work of film and television works, we can not trust editors too much, otherwise it may lead to poor editing cohesion, unreasonable editing and other quality problems. In the process of editing, there is no better way than to call the actors together and remake them. This will lead to the cost of the film, but also to the majority of actors inconvenience.

![Figure 1. Video and audio software.](image)

2. Relationship between post-production of film and television works and computer multimedia

2.1. Image editing and grafting The most important thing is image and sound
After a work is shot, there are still a variety of problems, can not be played directly, need to post-production. Post-production in many cases, than the pre-production task is larger, more targeted, need to spend longer time and energy. In movies, this information is mainly reflected in visual information, such as a new character, a different location, a complicated event, and so on. But
it can also be expressed as auditory information, such as narration, street sound, speech sound and so on. Sound, as a motivational factor, requires more accurate processing of picture and channel clips near the turn field. Sound can be generated by what can be seen in the current screen lens. And through computer multimedia technology, to complete a lot of real scene shooting can not be completed, such as more difficult pictures. Of course, there will be a lot of unsatisfactory places during the shooting, we can also use this technology to edit and edit, and strive to make the film and television works perfectly presented to the audience. The object that produces the sound may also not appear in the previous picture, but must have the sound existence, then cuts into the sound occurrence object, the audience will not notice the lens switch. Because in the last shot, they have processed receiving sound information, and the information is reasonable in their cognitive field. Sound can also be used as a turning motive. Connecting similar sounds together can be used as similarity transfer fields. The sound of the teapot appeared in the previous picture, and the next picture could take the train past with a huge roar.

2.2. The traditional film and television works are all two-dimensional techniques
In recent years, more special effects scenes, blockbuster production has become the mainstream, and foreign high-tech blockbusters have seized the Chinese market, the audience is more pursuing the display of three-dimensional impact technology works, So derived from the film and television post-production of three-dimensional technology widely used. Stereo composition is the application of three-dimensional composition in design and application in practice. This further promotes its application in film and television production, and brings great influence to the later stage of traditional film and television production. The application of new technology not only provides more space for film and television creators, but also improves the plasticity of film and television works.

![Figure 2. Multimedia server video sharing.](image)

3. Application of Computer Multimedia Technology in the Late Production of Film and Television Works

3.1. Interactive multimedia technology, more interactive impact
The application of this technology in film and television post-production will make no matter what kind of group, can find their favorite in a work. The use of computer multimedia technology for post-production editing of films can give full play to the characteristics and advantages of this technology. First of all, using computer multimedia technology can avoid the damage of the finished material in the process of handling. Compared with the traditional tape signal, digital signal has strong anti-interference, even multiple transmission and replication can ensure the quality of the signal and the integrity of the film. The combination of computer technology and film and television works can
better present the works to the audience, and the audience can freely express their opinions and suggestions, and have an interactive impact.

3.2. Integration of an excellent film and television works, more is the integration of technology

An excellent film and television work, must not be which team or which technology works alone, more is the integration of technology. In the use of computer multimedia technology, we should also use the network technology, diversified integration of various favorable factors to achieve better image, sound and other information processing. Now more flexible and effective nonlinear editing methods are widely used in film and television post-production. This makes the film and television in post-production abandoned the previous method, can be more convenient and flexible to cut and edit the film. can be easily fixed even if a cut and edit error occurs. By using the relevant software of computer, we can add, delete and change the information in the film and television drama works at will, enrich the expressiveness of the film and television works with the powerful function of the film and television digital production technology, and obtain the extraordinary audiovisual feast.

Table 1. Color depth.

| Micronet distribution | The total number of colors | The name of the image         |
|-----------------------|---------------------------|-------------------------------|
| 1                     | 16                        | Index 16 color images         |
| 4                     | 256                       | Index 256 color images        |
| 16                    | 65536                     | HI-Color image                |
| 24                    | 1777216                   | True Color Image (True Color) |

4. Conclusion
In the era of digital technology, "technology" and "art" should be integrated naturally and harmoniously. No matter how attractive technology is, it cannot replace the true story and profound thought. Computer multimedia technology is an essential part of film and television post-production. Without the combination of computer and multimedia technology, film and television works will be dull and empty. In a word, the use of computer multimedia technology in the process of film and television production can not only improve the efficiency, but also preserve the quality of film and television works. At the present stage, the film and television are developing towards the direction of diversification, from the variety of programs, content, to the mode of work, methods and so on, will continue to reform and optimize, computer multimedia technology is an important part of Chinese film and television post-production. The application of multimedia technology based on computer not only involves the concrete effect and level of film and television post-production, but also improves the appreciation of Chinese film and television drama. In this case, it is an inevitable trend to strengthen the application of computer network and multimedia technology in film and television.

References
[1] Ranu Baral, Declan C. Murphy, Ahmad Mahmood et al. The effectiveness of a nationwide interactive ECG teaching workshop for UK medical students [J] Journal of Electrocardiology, 2020, 58.
[2] Liu Hsing-Yuan, Wang I-Teng, Chen Nai-Hung et al. Effect of creativity training on teaching for creativity for nursing faculty in Taiwan: A quasi-experimental study [J] Nurse Education Today, 2020, 85(C).
[3] Roger H. Kim, John D. Mellinger Educational strategies to foster bedside teaching [J] Surgery, 2020, 167(3).
[4] David F. Grabski, Bernadette J. Goudreau, Jacob R. Gillen et al. Compliance with the Accreditation Council for Graduate Medical Education duty hours in a general surgery
residency program: Challenges and solutions in a teaching hospital [J] Surgery, 2020, 167(2).

[5] Madeline Cloonan, Abbey L. Fingeret Developing teaching materials for learners in surgery [J] Surgery, 2020, 167(4).

[6] Kathleen Naidoo, Heather Lawrence, Christopher Stein A model to facilitate the teaching of caring to diagnostic radiography students: Original research [J] Nurse Education Today, 2020, 86.