Research on Short Video Photography Technology Under the Integration of Computer Editing in The New Media Era

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Abstract. With the development of new media technology and the popularity of mobile devices, the short video platform has become one of the standing applications in the public's mobile phones, and the short video tool has added a new color to the development of video shooting technology while enriching the spiritual and cultural life of the public. In the era of new media convergence, short video shooting technology has become an indispensable part of video shooting, in view of this, this paper mainly focuses on the analysis and research of short video photography technology under the integration of computer editing in the new media era.

Keywords: short video photography, technology explore, artistic exploration and analysis.

1. Introduction
In today's rapid development of new media technology and computer technology, computer image processing and traditional photography and video technology can be closely combined, in view of this, it is necessary to analyze and study the current short video photography technology.

2. Analysis on the changing of photography concept under the integration of computer editing in the new media era
The development of new media technology has first and foremost changed the traditional photographer's self-positioning and photography concept to some extent. Influenced by traditional photography techniques, many video photographers place great emphasis on applying traditional photography techniques to extract artistic value from their videos. But the shorter duration and less synthetic artistry of short videos has had an impact on traditional photography techniques, and as a result, has changed the perception of some video photographers. Currently, diversification is one of the main trends in the development of the art of photography, which is embodied in the following aspects:

First of all, the photographic subject shows a trend of diversification. The development of short video platforms has made self-publishing mainstream, which has led to the development of regional diversification of video shooters, as long as the group can operate smartphones, can become short video shooters. This has led to the emergence of a group of amateur video photographers, and with the call and influence of such groups, short video shooting is becoming more and more popular. Secondly, video shooting methods tend to develop in a simplistic way. According to incomplete statistics, a total
of more than 600 million short video users in China, the group covers all ages and all classes, in order to better promote the development of short video platform, many platforms are trying to simplify the video shooting process and optimizing the series of features to make video shooting more convenient. It is possible to shoot a beautiful short video even without professional photographic equipment. Finally, the content of photographic works tends to develop in a diversified way. The development of short video technology has exerted a certain influence on traditional photographic technology, and the scope of photographic content is also more extensive.

3. Analysis on the technical characteristics of short video photography

3.1. Photographic images are more layered
In order to get rid of the traditional feeling of short video, in the process of short video photography, attention must be paid to the layer of the picture, which is the key to bring the audience a different visual experience. With this in mind, many short video shooters create layers of photographic images by scene-switching, adding special effects, or using different camera angles. However, it is important to note that in the process of creating layers, you need to choose the right angle and direction of shooting according to the content.

3.2. Short video time
The most prominent feature of short video is "short", the shooter often needs to shoot the content within 15 to 60 seconds, and do the corresponding video editing work.

4. Technical Analysis on Short Video Photography

4.1. Pre-shoot work
Currently, with the popularity of smartphones, many shooters use mobile phones for convenience, while some experienced shooters also prepare tripods, stabilizers, fill-in boards and other equipment. But if you want to further improve the quality of video shooting, it is best to use professional joystick video shooting equipment to shoot, and also prepare a tripod, filler board, mobile phone holder, radio, wide angle lens and other holding equipment. With the help of such equipment, the shooter can choose from wide angle, macro, fisheye, starlight, telephoto, and fill light according to their needs. In addition to this, the shooter should also have a certain knowledge of photography.

4.2. Work in progress
First of all, the shooter has to learn about photographic composition techniques and shooting skills. For example, we often see long or short shot videos in Kwai or Tik Tok, because the photographer uses a shooting skill of shooting scale, since the distance between the camera and the subject varies from time to time, there is a certain difference in the size of the subject in the camera, and it is because of this difference that the shooting scale skill is used. In the process of applying this skill, not only the subject should be close-up, but also the corresponding close shots and medium shots should be shot.

In general, different shooting scale present a certain difference in the characteristics of the shot and the mood of the shot, and in the process of short video shooting, if the photographer can integrate different shooting scale, the layer of the shot can become very rich. In addition, the emotions shown by the subject in different shooting scale are different and can provide a different viewing experience for the viewer. For example, by taking a close-up of the camera, you can show the micro expressions on the face of the person being photographed, as well as showing the inner activities.

For example, when shooting a set of videos of the changing seasons, if you can add a close-up of a person walking or reading a book, it will enrich the layers in the video and can serve as a finishing touch. In addition, composition is a very important part of short video shooting tips. The so-called composition, i.e., the process by which the photographer optimizes the layout of the picture by adjusting it, can be applied to effectively enhance the artistry and layer of the picture. For example, in
the drama "The Legend of Yi", there is a set of shots of Zhou Xun walking in the snow and sitting in front of a window with her back to the audience, applying the diagonal composition technique. The imaging and camera skills of the camera lens enable the viewer to better appreciate the psychological changes of the characters in the video. Generally, the composition methods are diagonal composition, rule of thirds and golden ratio composition.

For example, in the process of applying the rule of thirds method for shooting, the photographer should first be familiar with the picture, and then divide the picture into three parts evenly according to the corresponding proportions, and shoot the subject in the center where the three lines intersect, so that it can more easily attract the viewer's attention in the process of camera movement.

However, as most short videos are in 9:16 mode, diagonal composition skills should be applied for composition. At the same time, some novices try to create as few shots as possible during the shooting process, so as to make the picture look cleaner and highlight the subject.

In addition, there are also some relatively novel short video shooting methods summarized by beginners who often shoot Tik Tok and Kwai, among which the most common ones include the following: firstly, you can turn the phone and other shooting tools in one direction to shoot, this type of shooting method is often more suitable for shooting some emotional style of video; secondly, you can cover the lens with plastic wrap or skeleton paper for shooting, so that the video shot is more layered; finally, you can use the camera backlighting way to shoot, to create a different shooting mood.

4.3. Post-shoot work

In the process of short video shooting, photography post-processing work is also a very important part, which is not only the processing and correction of the pre-production work, but also the deep processing of the video.

In the process of shooting short videos, some professional photographers tend to apply to the more convenient video editing software such as Jianying and Kuaitying, while some professional video editors and processors will also apply to professional video editing and processing tools such as AE/PR.

As an example, the process of applying Kuaitying for video post-processing is divided into the following parts:

First, the user logs in to the interface. After entering the interface, the user needs to import videos waiting for editing, and then adopt different editing methods according to their preferences and video styles. If the content taken by the user is all photos, then the user can directly import the photos into the appropriate template and then click the button below for intelligent dubbing or adding the corresponding subtitles, and if necessary, the user can also record themselves. In addition, after importing the video, users can switch the video length and transition method, and even add filters and beautification to the original video.

Secondly, after the user has beautified the video, the user needs to match the video content with the appropriate music and then choose to add a watermark or remove the watermark for export.

Finally, the user uploads the exported video to the Kuaitying user interface for posting, where they also add the appropriate cover and tag the appropriate topic.

If users need to post the video on the Tik Tok short video platform, they need to post-process the video using its Jianying software. After the user logs into the interface, they need to click on the plus sign in the middle section to import or create a video first, after the video is added, then apply the software's various editing features to optimize the screen for short videos.

For example, can be applied to the video segmentation for editing function, if the photographer thinks this period of the beginning of the video is perfect and is needed, but suddenly find video a video quality is not OK or bad, the integral function can be used at this time, cutting out some of the content and then splice the rest. When we cut or merge the videos, we find that the transition between the two videos is not perfect or very stiff. Then we can use the transition function to make them perfectly connected.
On balance, both Kuaiying and Jianying among the two major short video platforms publishing editing software that provide great convenience for video editing work, but both video editing software have their own advantages and disadvantages.

In addition to short video software for video post-processing, some video recording software and camera software can also be used for video processing. For some novice, most will use the phone's built-in editing software for video processing. At the same time, in order to improve the visibility of the platform, Kuaiying has also launched a special one-click video processing template, so that users only need to make simple edits to the video, and the rest of the content can be completely left to the software for automated production. But in the process of shooting some professional videos, in addition to applying professional video editing software like AE, you have to apply PS to optimize the video footage as well. In addition, in the process of extracting some audio passages, professional recording software should be used for production.

Take the series of videos of moving artifacts launched by a museum as an example, which is cutout by using AE software and PS software, and then the picture is moved by applying key frames.

However, it should be noted that in the process of shooting short videos on mobile phones, due to certain differences in the parameters of various mobile phones, in order to improve the stability of the picture, corresponding stabilizers must be applied during shooting. But stabilizer shooting is only suitable for short term shooting, long term shooting is more physically testing for the shooter. In view of this, in the process of shooting short videos, if the night scene must be shot, the corresponding lighting equipment must be added, which can not only improve the brightness of the picture, but also facilitate post-processing and editing. It is also possible to apply the HDR mode on your phone for video shooting. If long-distance shooting is needed, gopro and other motion cameras can be used for shooting. Compared with mobile phones and ordinary digital cameras, motion cameras have better stability and fluency, and some cameras also have waterproof functions.

5. Conclusions
As shown above, with the continuous development of short video technology, short video has become an important element of photography, in order to further improve the artistic effect of short video, the relevant photography and video photography personnel must have an understanding of short video shooting technology and related skills, and organically integrate the traditional shooting technology and short video shooting technology for shooting. Only in this way can the quality of short video shooting be better improved, and the layer and beauty of short video be improved.

6. References
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