

THE ROLLING MOTION LIGHT PAINTING BLUR PHOTOGRAPHY AS THE JOUVENILE'S NEW INNOVATION PHENOMENON IN 2020'S

Ageng Soeharno¹, Itok Wicaksono²

Program Studi Ilmu Komunikasi, Universitas Muhammadiyah Jember¹

Program Studi Ilmu Pemerintahan, Universitas Muhammadiyah Jember²

agengsoeharno@unmuhjember.ac.id¹, itokwicaksono@unmuhjember.ac.id²

ABSTRACT

Photography is a word from the Greek "photos" (light) and "graphos" (writing), meaning "writing with light" (. Lynch-Johnt, B. A., & Perkins, Michelle.; 2008). According to the International Monetary Fund, the Covid-19 pandemic was the reason behind the global recession that resulted in rising rates of poverty and unemployment across all nations. As for the alternative to restoring economic institutions in each nation, it is economic recovery by the reinforcement of economic stimulus through local techniques (Arianto, B. 2021). The writing of this research theme is considered important because of the importance of the new photography result that is generated by this technique. The research aims to find new things to ask about cases that arise in the problems, namely: Generating the best result on rolling motion light painting blur photography, and The best speed of rolling motion that must be taken by the photographer to generate the best result on rolling motion light painting blur photography.

Qualitative research is grounded on values that emphasize the significance of individuals' subjective experiences and meaning-making processes, as well as the acquisition of a deep understanding (i.e., specific details from a small sample). In general, qualitative research is acceptable when exploring, describing, or explaining is your main goal (Leavy, Patricia: 2017). The movement taken by the researcher to get the results desired by the researcher is a rotating movement, where the camera is held by both hands with the arms straightened forward, so that the camera grip is held tightly, where this tight grip will impact the camera so that it does not experience significant shaking. The speed used to rotate the camera, especially in the last test, is 2 seconds, while the remaining 2 seconds are used to focus the camera on the talent, so that as far as possible the 2 seconds are used to rotate the camera properly and without significant shaking.

Keywords: Rolling Motion, movement, Light Painting Blur

Background

Photography is a word from the Greek "photos" (light) and "graphos" (writing), meaning "writing with light" (. Lynch-Johnt, B. A., & Perkins, Michelle.; 2008).

Photographers and artists working in various media have long recognized the basic fact that a piece of art is not the exact replica of the thing it depicts (Harold, D.; 2010).

The covid19 pandemic is one of the occurrences that has shocked Indonesia since it began in March of 2020. As of August 2020, 34 provinces in Indonesia had recorded 165,887 cases overall, with 7,169 deaths (Yamali, F. R., & Putri, R. N.; 2020).

According to the International Monetary Fund, the Covid-19 pandemic was the reason behind the global recession that resulted in rising rates of poverty and unemployment across all nations. As for the alternative to restoring economic institutions in each nation, it is economic recovery by the reinforcement of economic stimulus through local techniques (Arianto, B. 2021).

Covid-19 widespread affect in Indonesia is felt by different bunches, counting smaller scale and little trade performing artists, the condition is due to limitations on community exercises to avoid the spread of Covid-19 (Pribadi, A., & Hamdani, H.; 2022).

This condition made them confined to the house for a long time without anything to do, making them feel bored. Because of boredom, they finally decided to create a new discovery in the field of photography, namely Rolling Motion Light Painting Blur Photography.

The writing of this research theme is considered important because of the importance of the new photography result that is generated by this technique.

The results of photos using this technique are a combination of panning and light painting techniques but with still objects.

With the moveless of the photo object but the result is moving, that is the difficulty of this technique.

The purpose of the research is to find the best way to generate the result of the photo as has been told on the title above.

Because of the difficulties of the technique as has been shown by the photo result, in this case the writer decide the problem as follows:

1. How must the photographer set the DSLR Camera to generate the best result on rolling motion light painting blur photography?
2. How fast of rolling motion must the photographer be taken to generate the best result on rolling motion light painting blur photography?

The research aims to find new things to ask about cases that arise in the problems, namely:

1. Generating the best result on rolling motion light painting blur photography, and
2. The best speed of rolling motion that must be taken by the photographer to generate the best result on rolling motion light painting blur photography.

Motion Blur Photography

Motion blur appear in images as a result of camera focus errors and angle chages made while taking the photo (Rani, S., Jindal, S., & Kaur, B.; 2016).

Meanwhile, according to Y. Takahashi et al (2020:91) state that: The motion blur is that the smaller element circumstances that exist in a photo seem fly away.

Beside, according to Michael Potmesil et al (1983:389) state that: The motion blur is the condition of the image that the shutter of the camera remains open to capture the image on film due to motion of objects throughout the limited exposure period.

In this way, it can be concluded that the movement obscure happens due to out of center and changes within the point of shooting, as well as littler components in a photo showing up to fly absent and picture conditions where the camera screen remains open to capture the picture on film due to the development of objects all through the constrained introduction period.

Light Painting Photography

According to Yaozhun Huang et al (2018:18) state that: Light Painting is produced by shifting a light source about the room while a long exposure was being taken.

Meanwhile, according to Dr. Vinci M. Weng (2014:90) states that: Light Painting is automatism's method of producing dramatic tension, which seeks to unveil an additional hyper-realistic visual experience, simultaneously establishes a visual relationship and distinguishes between a two-dimensional image and a three-dimensional object.

Beside, according to Haci Mehmet et al (2016:2) states that: Light painting photography is The subject to be photographed or the area that responds to the sensor layer is illuminated, resembling a paintbrush.

Hence, it implies that Light Painting is created by moving the light source around the room when taking a long presentation by making an automatistic strategy of creating sensational pressure, which looks for to uncover extra, hyper-realistic visual encounters, whereas setting up visual associations and separating the two. -dimensional pictures and three-dimensional objects, conjointly where the subject to be shot or the zone that reacts to the sensor layer is enlightened, taking after a brush.

Rolling Photography

According to Trong-Hop Do et al (2016:2) states that: The readout time of one row is now equal to the mechanism of the delay time between exposures of two rows.

Meanwhile, according to Shogo Fukushima et al (2016:101) states that: In order to synchronize audio and visual effects, numerous technologies have been created. For instance, a CMOS camera can be used to record the movements of string instruments as a visual medium. Nevertheless, fast moving objects are distorted during the scanning sequence because a CMOS sensor scans video line-by-line in succession. The term "rolling shutter effect" refers to this morphing and distortion, and it is a kind of creative photography much like slit-scan and strip photography. This effect is typically not visible to the unaided eye and can only be observed through a camera viewfinder or on a computer screen.

Beside, Abdullah Harun Incekara et al (2021:549) also states that: The shutter's primary function in a camera is to regulate the amount of light that reaches the sensor. How and when light is recorded by a camera is determined by its shutter. Global and rolling shutters are the two main types seen in modern cameras. The idea behind a camera with a global shutter is to instantly capture an interesting picture. On the other hand, line-by-line scanning, which occurs in a camera with a rolling shutter, is this procedure spread out over time.

It implies that the readout time of one push is presently rise to to the component of the delay time between exposures of two lines. In the interim, In arrange to synchronize sound and visual impacts, various innovations have been made. For occurrence, a CMOS camera can be utilized to record the developments of string rebellious as a visual medium. In any case, quick moving objects are misshaped amid the filtering grouping since a CMOS sensor looks video line-by-line in progression. The term "rolling screen impact" alludes to this morphing and twisting, and it may be a kind of inventive photography much like slit-scan and strip photography. This impact is regularly not unmistakable to

the unaided eye and can as it were be watched through a camera viewfinder or on a computer screen. Next to, the shutter's essential work in a camera is to control the sum of light that comes to the sensor. How and when light is recorded by a camera is decided by its screen. Worldwide and rolling screens are the two fundamental sorts seen in cutting edge cameras. The thought behind a camera with a worldwide screen is to immediately capture an curiously picture. On the other hand, line-by-line filtering, which happens in a camera with a rolling screen, is this strategy spread out over time.

Method

In general, research techniques are thought of as a scientific study activity that was conducted gradually, starting with topic selection, data collection, and analysis, and ending with the eventual understanding and grasp of certain themes, symptoms, or concerns. The reason it mentioned "gradual" is that there are actions that must be completed in phases before going on to the next since this activity follows a set procedure (Raco, Dr. J.R., ME., M.Sc. : 2010).

Qualitative research is grounded on values that emphasize the significance of individuals' subjective experiences and meaning-making processes, as well as the acquisition of a deep understanding (i.e., specific details from a small sample). In general, qualitative research is acceptable when exploring, describing, or explaining is your main goal (Leavy, Patricia: 2017).

This study was reviewed at the laboratory of the Communication Science Program on the Social and Politic Science Faculty in University of Muhammadiyah Jember. The data taken came from trials held in the laboratory involving students as objects and models for this research.

Data or evidence regarding the value or worth of a program, procedure, or approach are gathered for evaluation research. Its primary goal is to lay the groundwork for decision-making. For evaluation study, information or proof on the merits of a program, process, or strategy is obtained. Establishing the foundation for decision-making is its main objective. The goal of applied research is to raise the standard of a given discipline's practice. In general, applied social science researchers are more engaged in communicating with a distinct audience than basic researchers (Mirriam, Sharan B. 2009).

There are two main ways in which researchers observe – direct observation and participant observation. It involves the observation of a 'subject' in a certain situation and often uses technology such as visual recording equipment or one-way mirrors. For example, the interaction of mother, father and child in a specially prepared play room may be watched by psychologists through a one-way mirror in an attempt to understand more about family relationships. Documentation is any written material or film, while records are any written statements prepared by a person or group for the purpose of testing an event or presenting accounting (Dawson, Dr. Catherine, 2009: 32).

In direct observation, the researcher directly observes the events of the research directly regarding what students do with this material, while in participant observation, the researcher conducts research by inviting students as objects and talents of this material.

RESULT

From the discussion in the previous chapters, the results can be taken as follows:

1. Movement occurs only in the camera,
2. The object does not need to move at all, because the creative idea arises purely from the photographer's thoughts.
3. There are only a few elements in the practice of this theory, namely tripods, cameras and cellphones (light sources), the rest are additional, for example humans as objects and subjects.

Next, let's begin our discussion according to the results written above:

Equipment

The equipment needed for this research includes:

1. Cellphone (as a flashlight source)
2. DSLR camera (Canon EOS 80D)
3. Camera Tripod (optional equipment)

Discussion

1st Stage

First of all, turn on the DSLR camera, in a standing position (portrait), then adjust the exposure triangle. At the start of the trial, the author tried to use the following exposure triangle settings:

Lens length 45mm, f/8, speed 3 seconds, ISO 100, EXP 0, and no internal or external flash. In this method, the camera is held on

the left and right sides using both hands while rotating it slowly, then what appears is the result as in "figure 1".

Figure 1



In Figure 1 above, it is clear that there is no harmony between the lines of light and the model, which occurs because the rotation of the camera from portrait to landscape is done very slowly, so that the lines formed from the light appear irregular and tend not to form a semicircle as shown. expected. When your hand holds the camera, it is very possible that your hand will shake, especially when the camera rotates from standing to sleeping. During an incident like this, the condition of the hand will be very decisive, because the hand is the one that determines whether the result of our image is good or not, plus the length of time used to capture the image is 3 seconds, it would be very risky if the condition of the hand is unstable.

2nd Stage

At this stage, the researchers tried to speed up the camera's recording power to only 2 seconds, but still rotated the camera at the same speed as the first image, so the resulting image looked like in Figure 2.

In this picture it is very clear that there is a buildup of images, especially in the "talent" object.

Figure 2



In this image, there is clearly a real shadow of "talent", caused by the slow rotating movement of the photographer's hand. As a result of the slow movement, the camera recorded several objects it captured. Apart from that, the double image was also caused by the aperture being too small.

At this stage it can be said that shooting using rolling motion light painting blur has failed to achieve the desired target or desire. Firstly, because there is a double image, secondly because the circular light is not on target, or there is a lack of semi-circular light due to the insufficient amount of light.

3rd Stage

This change is actually not very significant, considering that there is no significant change in speed and ISO, but there is the good side, that from this change, the lesson can be learned that the image becomes clearer to the point where it no longer creates shadows, as can be seen in Figure 3.

Figure 3



The exposure triangle settings for this image are as follows, lens length 18mm, aperture f/10, speed 4 seconds, ISO 320, no light assistance at all. With such a large diaphragm opening, it is very easy for the camera to capture very clear images, so that there are absolutely no visible shadows in the image, especially "talent" shadows.

In this picture the key to the success of this trial is starting to show results. With a diaphragm opening size of 10, it really makes something different in the results. That with a diaphragm opening size of 10, the image really looks alive and completely without shadows.

4th Stage

At this stage, the researchers once again made a major change, especially to the exposure triangle settings. At this stage, the changes used by researchers experience changes, especially in speed and diaphragm.

Figure 4



The settings are as follows, namely with 26 mm on the lens, then an aperture of f/13 on the diaphragm, shutter speed is 2 seconds and ISO 320. And the results can be seen in Figure 4, where the image appears intact even though the white light line looks circular. and this is the researcher's attraction which is very close to perfection.

5th Stage

At this stage the researcher tries to take a middle path from a series of trials that the researcher has taken. The middle path here is in the form of changes that occur in the exposure triangle settings. From the results of the last trial, something can be produced which according to the researchers has achieved 98% of the success of this research. By increasing the number of cell phone flashlights as a light source, you will finally see whether rolling is occurring or not.

Figure 5



With settings consisting of 18 mm for the lens length, with a diaphragm of f/10, a shutter speed of 4 seconds, and ISO 320, you will see results like those in Figure 5, where in this picture all the feelings of fatigue, irritation, annoyance and so on into a feeling of "success

Conclusions

From the discussion above, it can be concluded that there are 3 things that can be concluded as things that can be done based on the research above, namely movements, speed, and camera setting.

The movement taken by the researcher to get the results desired by the researcher is a rotating movement, where the camera is held by both hands with the arms straightened forward, so that the camera grip is held tightly, where this tight grip will impact the camera so that it does not experience significant shaking. . With the lack of shaking, it will be possible to photograph objects very clearly and without producing shadows, besides that the rotating effect produced by the camera's flashlight becomes neater. From a shutter speed of 4 seconds in the last trial, the movement taken was rotating for 2

seconds and the rest was used to keep the camera from moving while holding your breath, and focused on the "talent" object that we were shooting.

There are 5 stages of camera setup as explained in the previous chapter, from these five stages the final camera setting was taken as the most appropriate for use in this research, and the most appropriate final camera setting is:

Camera : Canon EOS 80D (DSLR)
Lens Length : 18 mm
Diafragma Aperture : f/10
Shutter Speed : 4 Seconds
ISO : 320

Suggestion

From the beginning to the end of writing this research report, there are still many shortcomings, for this reason the author does not tire of asking for input, corrections and constructive criticism.

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