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Color Enhancing, Center Spot, Rainbow and Star as Improvised Filters for DSLR Camera

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ABSTRACT

Camera lens filters are important in digital photography. More people have their personal DSLR cameras in their household. The study developed an improvised filters utilizing cheap materials that are available in the local outlet retailers. Once the materials are purchased, these filters can be prepared and done at home. Cutting and pasting are the skills needed to create the filter. The camera was operated in full manual mode so the photographer was able to control the photography. Visual quality of the shots were exhibited and evaluated. Evaluation of the filters was presented into three different areas of focus; (1) Rating as to color enhancing, center spot and rainbow filters; (2) Quality of the filter effects to the photography; and (3) Correct exposure, focus and clarity of the photos. Photography instructors and practitioners evaluated the outputs and presented their comments and suggestions. Improvised Color Enhancing, Center Spot and Rainbow Filters have a perfect rating in the expected result according to its purpose, good quality of effect and appropriate in exposure, focus, and clarity. The Star Filters were rated satisfactory because the best result can be achieved using one layer of the filter instead of two layers. The outputs are highly recommended improvised filters for DSLR camera.

Keywords — Science and Technology, improvised camera lens filter, visual qualitative research, Philippines

INTRODUCTION

Camera lens filters are important in digital photography to enhance the effects of the scene and ambiance of a photograph. These lens filters were used to change the representation of light that passes through the lens and enhance special effects, colors, and images to the photograph. The Digital Single Lens Reflex or DSLR cameras (Mehbub, 2007) are more versatile than its predecessor, the Single Lens Reflex (SLR) because they are equipped with built-in effects and easier to link with post photography enhancement thru photo editing software in the computers. Other special effects of these cameras can be more fun by purchasing accessory filters which are attached to the lens of the DSLR camera. However, camera filters are expensive. Tiffen brand of 4 Point Star Filter cost $60 and not available in the local area (Sawyer, 2010). Photographers' shops and camera stores are only available in the selected major cities. The study showcases the possible material in the area to better comprehend the effects of a commercial filter without the burden of locating legitimate photographer store and spending high costs of a reputable filter brand. Camera filters also do their part not just in photography but also in cinematography (Hughes, 2010). Aside from photography, DLSR cameras are now equipped with video capability. The fast development of DSLR cameras has ignited a revolution in digital filmmaking, and the "Shot on DSLR" badge (Canon, 2012) a popular phrase for independent filmmakers. The visual culture today brings digital filmmaking very handy to all users, manipulation is easy and some applications are downloadable on the internet. This opens the door to create affordable filters in photography and satisfy the aesthetic enthusiasm in a cheaper cost. It encourages to explore the excitement of an on-the-spot photography and limits the use of post photography enhancement because post production software like adobe and Corel (Tolmache, 2010) has a reasonable price but the hardware are expensive.

FRAMEWORK

The Filters – The School of Film Making in North Carolina School of Arts (2015) defined that filters are used to modify the light in reaching the film to produce a specific effect.

Color Enhancing Filters (Fig.1) – This filter may be used in filming and when creating spectacular effects on the reds and oranges in the shot since it has very little effect on other colors. (Fig.2)

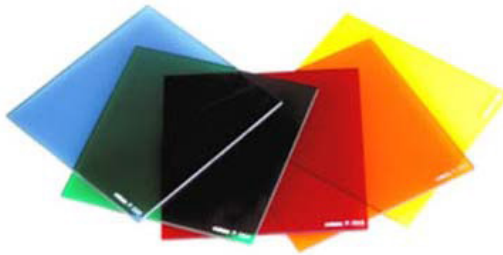

Figure 1. Enhancing Filters
(Photo: guide.alibaba.com)

Figure 2. Color Enhanced Photos
(Photo: www.ghacks.com)

Star Filters – these are used to produce lines from bright objects (point sources) in the scene to produce a star-like effect. The North Carolina School of Arts (2015) further stated that depending on how many lines are etched, you may have 2, 4, 6 or 8 pointed stars (4 and 6 are the most commonly used)." (Fig. 3 & 4) Star filters also comes in different designs like 2, 4, 6, and 8 pointed star (Sawyer, 2010).

Figure 3. Photo taken by a Star 4 Filter (Photo: www.vistek.ca)

Figure 4. Photo taken by a Star 8 Filter (Photo: photography.tutsplus.com)

Center Spot Filter – Sawyer (2010) mentioned the idea of a center spot filter in which the center of the photo stays nice and sharp while the rest of the images are diffused and the detail in the background is blurred. This effect is created by the center of the filter containing either a hole or simply a piece of clear glass. (Fig. 6)

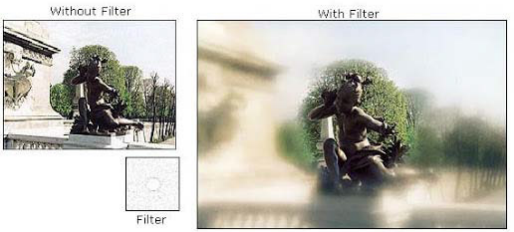

Figure 5. Photo taken by a Center Spot Filter(Photo: www.microglobe.co.uk)

Figure 6. Center Spot Filter (Photo: www.hoyafilter.com)

Rainbow Filter – a filter that is used to create a rainbow in the photograph. (Fig.8)

Figure 7. Photo taken by a Rainbow Filter
(Photo: www.bhphotovideo.com)

Figure 8. Rainbow Filter
(Photo: www.mathersoflanchashire.co.uk)

OBJECTIVES OF THE STUDY

The study was conducted to present an empirical evaluation to the extent of homemade and do-it-yourself improvised filters utilizing possible materials available in the locality without spending too much. These improvised filters were exhibited to display the effects that they can provide. They were able to open the door into the Fine Arts photography as well as homemade cinematography which happens to be a wholesome activity to satisfy aesthetic desires to shoot.

MATERIALS AND METHODS

The study used Digital Single Lens Reflex Camera (DSLR). Mehbub (2007) stated that the Single Lens Reflex (SLR) Camera was the predecessor. The study did not used SLR because only the camera collector has SLR nowadays. SLR is no longer available in many camera stores. It opens up creativity and ability to explore further in the creation of homemade and amateur cinematography.

Experiences and knowledge in the art of photography were stated by Coumans (2014) that it is essential to bring out the identification of materials that would be possible in creating visual effects for a camera filter. The researcher tested the filters in various photo sessions and exhibit the outputs for evaluation. This improvised filters was made of recyclable materials such as cardboards, celluloid,

folders, silks, and plastic bottles. Instructions in crafting the improvised filters were illustrated in a form of pictures and displayed in the photo-exhibit.

After preparing the materials needed, the improvised filters were created in a workshop set-up. First step is to create the filter holder according to the size and diameter of the lens.

Steps in creating the Filter Holder for DSLR camera

Figure 9. Tracing the Lens of the Camera to make the filter holder

Figure 10. Shaping the cylinder from the lens of the Camera

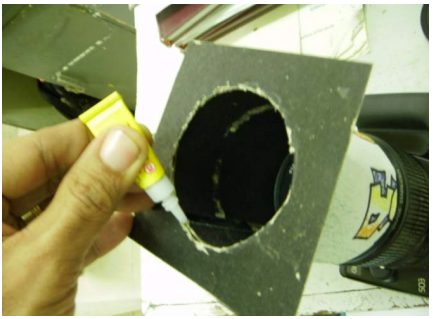

Figure 11. Glue the Holder and the cylinder

Figure 12. Mount the filter holder to the Camera

Improvised Color Enhancing Filters – these are made of colored cellophane available in every school supply store. The frames were made of used illustration boards.

Figure 13. Improvised Green Filters

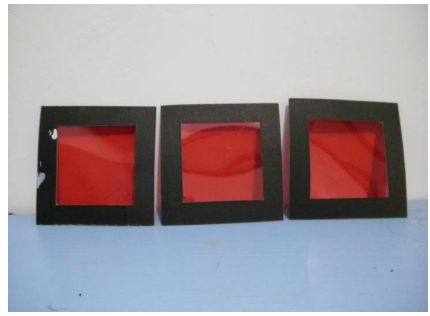

Figure 14. Improvised Red Filters

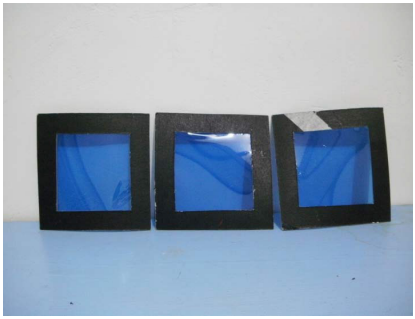

Figure 15. Improvised Blue Filters

Figure 16. Improvised Orange Filters

Star Filters – are made of screens abundant in the local textile store. These screens were glued on a used illustration. There were two kinds of screens used in creating an improvised star filter (See Figures 17 & 18).

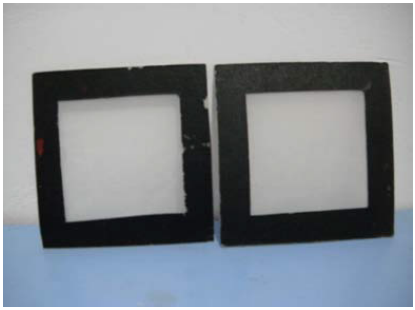

Figure 17. Silk Star Filters

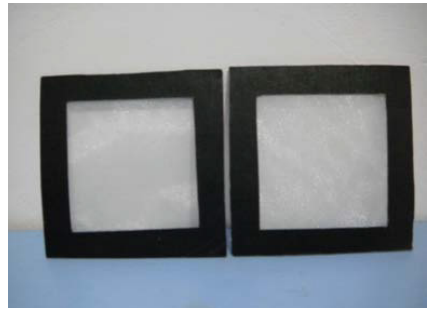

Figure 18. Nylon Star Filters

Center Spot Filters – made of two different materials from upcycled white sliding folder and a disposable plastic bottles. The center spot filters were made by cutting a small hole in the middle of the filter. The circle and heart were the popular shapes used in this study. The filter in the left below (Fig. 19) is circular shape while the other one in the right is heart shape.

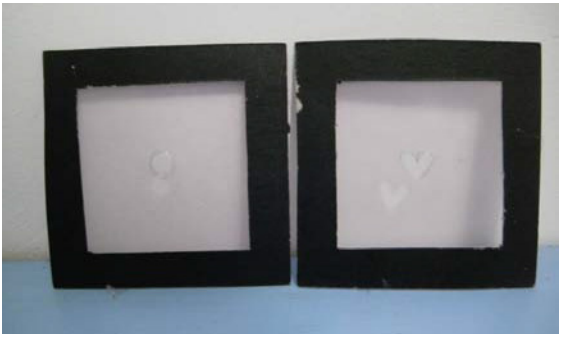

Figure 19. Center Spot Filters made of sliding folder

Another version of center spot filter used an upcycled disposable plastic bottle. The bottle below was chosen for its flower-like design in the bottom. The bottle shown below was a bottle of a Powerade sports drink. (Fig. 20)

Figure 20. Powerade bottle

Figure 21. Cutting the bottle

Figure 22. Cutting the Center Spot using a soldering iron

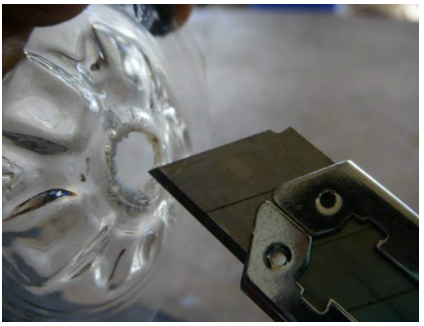

Figure 23. Cutting the Center Spot using a hand cutter to make the hole smoother

Figure 24. Glue the cut plastic bottle on an illustration board

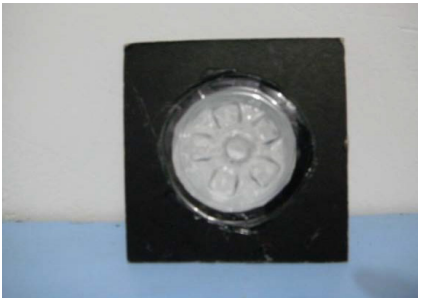

Figure 25. Center Spot Filter made of disposable plastic bottle

Rainbow Filter – used an acetate bought from local school supply store and glued to a cardboard. The rainbow was hand painted using a small pointed Chinese brush and an industrial latex paint.

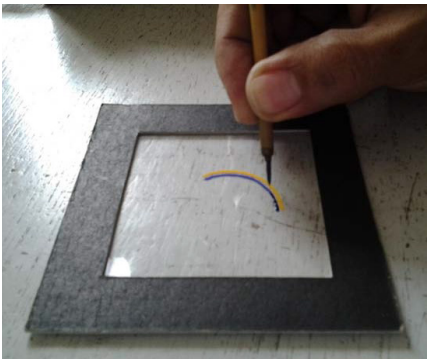

Figure 26. Painting the rainbow over an acetate to make a rainbow filter

Figure 27. Let the paint dry

After creating the improvised filters, the photo sessions started in various scenes. The camera took pictures without flash and manual mode. The researcher photographer recorded and documented all the settings for purpose of review to the camera controls used in the photography. The filter holder was inserted to lens of the DSLR and used paper clips to hold the improvised filters.

The color enhancing filters were tested in daylight condition. They were also tested in two (2) and three (3) more layers. The improvised star filters were best when tested against a strong direct light like spotlight and the sun itself. These direct lights were observed in day and night time so the star filter was tested with these lighting condition. The center spot filters were explored in different variations like the upcycled sliding folder and the plastic bottle. These filters were best in emphasizing a subject located at the center and tested with different subject like architectural and flowers. The rainbow filters were special type of filters to produce an instant rainbow in the scene. Possible lighting condition is only feasible to a broad daylight with clear sky. As part of the visual qualitative research, Malins and Gray (1995) stated that the "the outputs would be exhibited and subjected to a peer review or evaluation where outcomes are negotiated and broad generalizations of the data.

The outputs from the photo session were exhibited and curated with a selective title that reflected the culture of using filters in taking pictures. In the exhibit, photography practitioners and instructors evaluated the outputs.

Above: "Filtura" was the title of the exhibit of the Improvised Filters for DSLR Camera which was held last September 28, 2015 at the 2nd floor of the Administration Building.

Above: Curious students testing the effects of the Improvised Camera Filter during the Exhibit.

Above: The researcher, evaluators, and Coordinators in the University Research Office headed by Prof. Petronila E. Florendo

Quantitative Evaluation of the filters presents the three different areas of focus: expected result of the filter were achieved according to its purpose; quality of the filter effects to the photography; and photo taken at proper exposure, focus, and clarity (Ke, Tang & Jing, 2006). Mean ratings were expressed in descriptive rating ranging:

3.26 to 4.00	Excellent	2.61 to 3.25	Very Satisfactory
1.76 to 2.50	Satisfactory	1.00 to 1.75	Poor

RESULTS AND DISCUSSION

The outputs of the improvised Filters were displayed and exhibited showing the actual filters and settings used set by the DSLR in manual mode. During the exhibition, the photography instructors rated the filters based on area of focus and gave their comments and suggestions to further enrich the study. All the figures below show the exact controls and settings used by the DSLR camera. The DSLR camera used is a Canon EOS 1200D and the lens was the default factory zoom lens. The filter holder used a paper clip to attach the improvised filters in the photo sessions. The pictures presented in the study and in the photo exhibit were not edited by post photography digital software.

Figure 1
Filter: None
Aperture: F/8
Speed:1/1600
ISO:400
Focal Length:18mm.
Compensation:0 step

Location:
Dancing Fountain, Plaza Salcedo,Vigan City, Ilocos Sur

The results of the improvised filters as rated by the evaluators from three (3) areas of focus; 1) Rating as to color enhancing, center spot and rainbow filters, 2) Quality of the filter effects to the photography, and 3) Correct exposure, focus and clarity of the photos. Every figure reveals the evaluation results and the mean rating by the evaluators.

The following color enhancing filters were attached to the camera and the evaluation rating was recorded for each type of filter:

I. Improvised Color Enhancing Filters

a. The orange Filter which is intended to make a warm scene (warm effect) ambiance. The test on this filters was taken under daylight condition to make the enhance color effects more visible.

Figure 2
Filter:1pc. Orange
Aperture: F/8
Speed:1/1250
ISO:400
Focal Length: 18mm.
Compensation: 0 step

Evaluation Result
Mean Rating:3.67
Descriptive Rating: Excellent

Figure 2.1
Filter:2pcs. Orange
Aperture: F/8
Speed:1/1250
ISO:400
Focal Length:18mm.
Compensation: 0 step

Evaluation Result
Mean Rating:3.00
Descriptive Rating: Very Satisfactory

Figure 2.2
Filter:3pcs. Orange
Aperture: F/8
Speed:1/800
ISO:400
Focal Length: 18mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.50
Descriptive Rating: Satisfactory

b. Blue Filter that sets a cool effect of the scene. The blue filter, closed form, and selective focus emphasize how isolated and oblivious are the surroundings (Hughes, 2010).

Figure 3
Filter:1pc. Blue
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.67
Descriptive Rating: Excellent

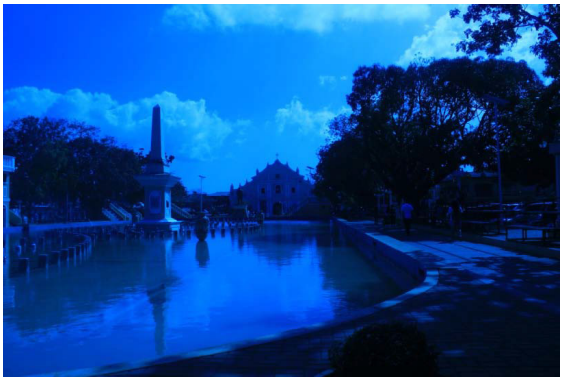

Figure 3.1
Filter:2pcs. Blue
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.67
Descdescriptive Rating: Very Satisfactory

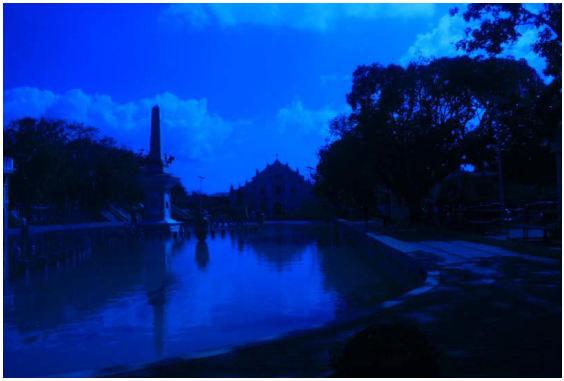

Figure 3.2
Filter:3pcs. Blue
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.17
Descriptive Rating: Satisfactory

c. Red filter brings out a bold drama to the scene like horror and danger (intense effect) to the scenario (Hughes, 2010). The multiple layers of filters used compromised by the visibility of details in the subject.

Figure 4
Filter:1pc. Red
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.67
Descriptive Rating: Excellent

Figure 4.1
Filter:2pcs. Red
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.67
Descriptive Rating: Very Satisfactory

Figure 4.2
Filter:3pcs. Red
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.17
Descriptive Rating: Satisfactory

d. Green filters give out a nostalgic feeling of freshness and reverence (refreshing effect) to the scene. In general, cool colors like blue, green, and violet suggest tranquillity, aloofness, and serenity (Hughes, 2010). For every layer that was added, the color of the filter becomes more vibrant.

Figure 5
Filter:1pc. Green
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.67
Descriptive Rating: Excellent

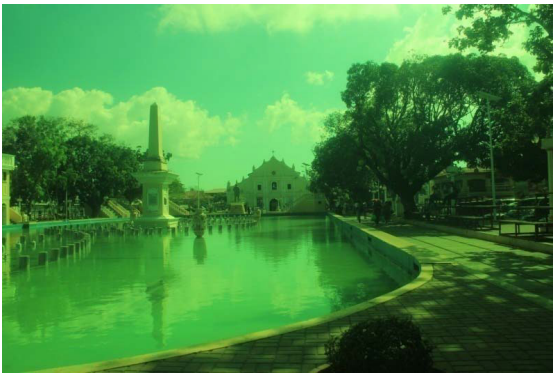

Figure 5.1
Filter:2pcs. Green
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.00
Descriptive Rating: Very Satisfactory

Figure 5.2
Filter:3pcs. Green
Aperture: F/8
Speed:1/800
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.17
Descriptive Rating: Satisfactory

In all the colors used in the study (orange, blue, green and red), the use of a single or one (1) piece of improvised color filter mounted on the camera achieved excellent in the evaluation (3.26 – 4.00). It has a perfect rating in the expected result according to its purpose, good quality of effect and appropriate in exposure, focus, and clarity.

e. Color Combination involving seven (7) different combination from single color enhancing filters of red, green, blue and orange. For the seven outputs in the combination of different color filters, two (2) sets of experimentation; such as; 1) the combination of two (2) different colors and, 2) the combination of three (3) different colors.

Figure 6
Filter: None
Aperture: F/5.6
Speed:1/500
ISO:100
Focal Length:55mm.
Compensation:0 step

Location: Bantay Bell Tower, Bantay, Ilocos Sur

The combination of improvised filters was combined with colors to discover its unexplored outcome. The first set of the combination used two-color filter combination. The next set made use of the three-color combination of the improvised filters.

The researcher chose a subject with clear blue and a green foreground with a front layer represented by the leaves so that the effects of the filter may also see the changes of its color in a different layer of the subject.

e. 1. Orange and Red intend to bring out the different tone of intense effect compared to the improvised red filter. Color symbolism is culturally acquired while warm colors (red, orange, and yellow) suggest aggressiveness, violence, and stimulation (Hughes, 2010).

Figure 6.1
Filter: orange & red
Aperture: F/5.6
Speed:1/125
ISO:100
Focal Length: 55mm.
Compensation: 0 step

Evaluation Result
Mean Rating: 3.00
Descriptive Rating: Very Satisfactory

e. 2. Orange and green – brings out a tone of intense effect compared to the use of a single improvised red filter and a combination orange and red filter improvised.

Figure 6.2
Filter: orange & green
Aperture: F/5.6
Speed:1/125
ISO:100
Focal Length: 55mm.
Compensation: 0 step

Evaluation Result
Mean Rating: 2.17
Descriptive Rating: Satisfactory

e. 3. Red and green have intense romanticization effect to the ambiance.

Figure 6.3
Filter: red & green
Aperture: F/5.6
Speed:1/80
ISO:100
Focal Length:55mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.67
Descriptive Rating: Excellent

e. 4. Blue and green give a tone of a cool effect to the ambiance compared to the use of an improvised blue filter.

Figure 6.4
Filter: blue & green
Aperture: F/5.6
Speed:1/125
ISO:100
Focal Length: 55mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.67
Descriptive Rating: Excellent

The double or two (2) pieces of improvised color enhancing filters mounted on the camera achieved very satisfactorily in the evaluation (2.61-3.25). While the triple or three (3) pieces of color enhancing filters attached to the camera attained a satisfactory rating (1.76-2.50).

In the two (2) color combination of improvised filters, the combination of red and green, blue and green improvised color enhancing filters both achieved an excellent descriptive rating (3.26 – 4.00) by the evaluators. While the combinations orange and red, orange and green have a very satisfactory rating (2.61-3.25). All the combinations of the two (2) color filter gain a perfect (3.26 – 4.00 Excellent) to achieve the expected result of the filter according to its purpose.

e. 5. Orange, blue and green – a three (3) color combination that brings out a different, refreshing effect compared to the use of a single improvised green color enhancing filter.

Figure 6.5
Filter: orange, blue & green
Aperture: F/5.6
Speed:1/50
ISO:100
Focal Length: 55mm.
Compensation: 0 step

Evaluation Result
Mean Rating: 3.00
Descriptive Rating: Very Satisfactory

e. 6. Red, blue and green – Another three (3) color combination gives a tone of refreshing ambiance to the scene.

Figure 6.6
Filter: red, blue & green
Aperture: F/5.6
Speed: 1/20
ISO: 100
Focal Length: 55mm.
Compensation: 0 step

Evaluation Result
Mean Rating: 3.33
Descriptive Rating: Very Satisfactory

e. 7. Red, orange, and green (3) color combination give out a different tone of intense ambiance.

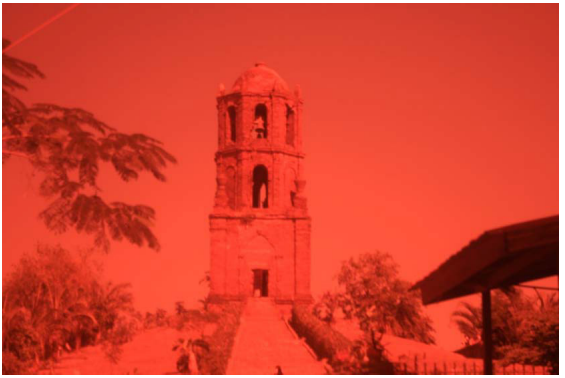

Figure 6.7
Filter: red, orange & green
Aperture: F/5.6
Speed:1/60
ISO:100
Focal Length: 55mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.00
Descriptive Rating: Very Satisfactory

For the three (3) color combination of improvised color enhancing filters, all the combination; a) red, orange & green, b) red, blue & green, and 3) orange, blue & green achieved a very satisfactory rating (2.61-3.25). In the expected result of the filter accomplished according to its purpose, only the red, orange & green and the red, blue & green combination have a perfect descriptive rating (4.00) in the evaluation.

II. Improvised Star Filter using Silk Screen

The following experiments using silk was tested in different situations like daytime and night time exposing the filters in different lighting condition such as the single and source of light.

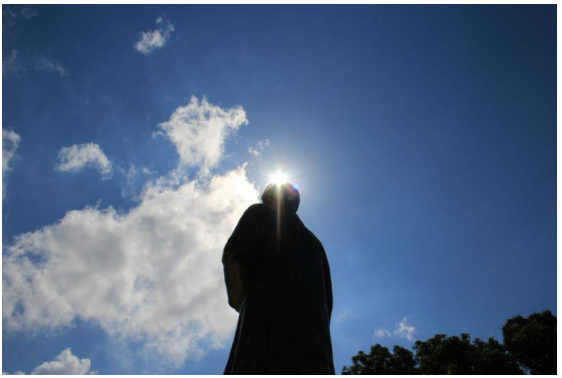

Figure 7
Filter: No Filter
Aperture: F/8
Speed:1/2500
ISO: 100
Focal Length:20mm.
Compensation:0 step

Location: Rizal Monument,
Plaza Salcedo,
Vigan City, Ilocos Sur

a. One (1) piece silk screen filter to dramatize the star effect on silhouette in daylight condition

Figure 7.1
Filter:1 pc. Silk screen
Aperture: F/8
Speed:1/2500
ISO:100
Focal Length: 18mm.
Compensation:0 step

Evaluation Result
Mean Rating: 3.17
Descriptive Rating: Very Satisfactory

b. Two (2) pieces silk screen filter to dramatize the star effect on silhouette in daylight condition

Figure 7.2
Filter:2 pcs. Silk screen
Aperture: F/8
Speed:1/2500
ISO:100
Focal Length:18mm.
Compensation: 0 step

Evaluation Result
Mean Rating:3.17
Descriptive Rating: Very Satisfactory

The next experiments of the improvised star filters were set in a place where there is multiple night lights.

Figure 8
Filter: No Filter
Aperture: F/4.5
Speed:1/25
ISO:3200
Focal Length: 33mm.
Compensation: 0 step

Location: Heritage Village, M. Crisologo St.
Vigan City, Ilocos Sur

c. 1pc. silk screen- Star Effect on Multiple Night Lights

Figure 8.1
Filter:1pc. Silk screen
Aperture: F/4.5
Speed:1/60
ISO:3200
Focal Length: 33mm.
Compensation: 0 step
Evaluation Result
Mean Rating: 3.17
Descriptive Rating: Very Satisfactory
Evaluation Result
Mean Rating: 2.17
Descriptive Rating: Satisfactory

d. 2pcs. silk screen- Star Effect on Multiple Night Lights

Figure 8.2
Filter:2pcs. Silk screen
Aperture: F/4.5
Speed:1/80
ISO:3200
Focal Length:33mm.
Compensation: 0 step

Evaluation Result
Mean Rating: 2.83
Descriptive Rating: Very Satisfactory

The next experiments of the improvised star filters were set in the presence of multiple night lights.

Figure 9
Filter: No Filter
Aperture: F/4.5
Speed: 1/80
ISO: 3200
Focal Length:33mm.
Compensation: 0 step

Location:
St. Augustine Parish Church, Paoay, Ilocos Norte

e. 1pc. silk screen- Star Effect on Single Night Light

Figure 9.1
Filter:1pc. Silk screen
Aperture: F/5.6
Speed:1.3sec.
ISO:100
Focal Length:25mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.17
Descriptive Rating: Very Satisfactory

f. 2pcs. silk screen- Star Effect on Single Night Light

Figure 9.2
Filter:2pcs. Silk screen
Aperture: F/5.6
Speed:2 sec.
ISO:100
Focal Length: 25mm.
Compensation:0 step

Evaluation Result
Mean Rating: 2.83
Descriptive Rating: Satisfactory

The improvised star filters using silk screen was also experimented with the star effect on sunset.

Figure 10
Filter: No Filter
Aperture: F/22
Speed:1/800
ISO:400
Focal Length:21mm.
Compensation:0 step

Location:
Fuerte Beach,
Caoayan, Ilocos Sur

g. 1pc. silk screen Star Effect on Sunset. The effect of the silk filter on the water riffles vanishes the details.

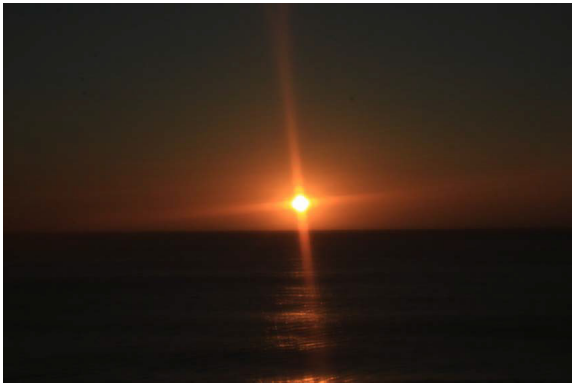

Figure 10.1
Filter:1pc. Silk screen
Aperture: F/20
Speed:1/800
ISO:400
Focal Length: 45mm.
Compensation: 0 step

Evaluation Result
Mean Rating: 3.00
Descriptive Rating: Very Satisfactory

h. 2pcs. silk screen Star Effect on Sunset. For the two pieces, it successfully formed an eight point star but the no more visibly of waves and riffles.

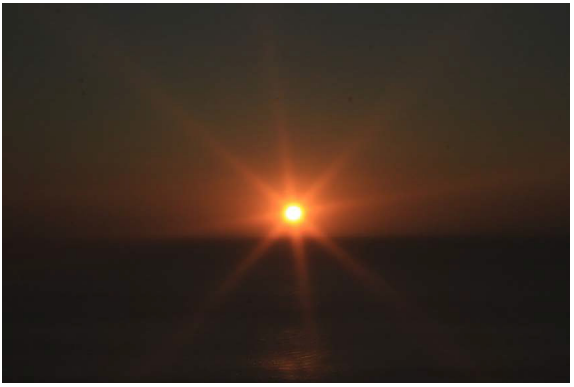

Figure 10.2
Filter:2pcs. Silk screen
Aperture: F/20
Speed:1/320
ISO:400
Focal Length:51mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.83
Descriptive Rating: Very Satisfactory

Improvised Star Filter using Nylon Screen

The following experiments in the use of silk was tested in different situations like daytime and night time exposing the filters in different lighting condition such as the single and multiple colored lights.

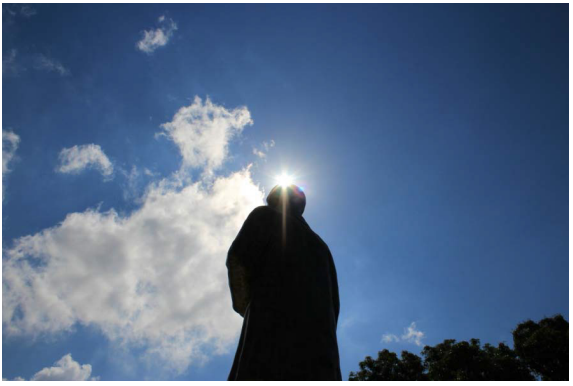

Figure 11
Filter: No filter
Aperture: F/8
Speed:1/2500
ISO:100
Focal Length:20mm.
Compensation:0 step

Location: Rizal Monument,
Plaza Salcedo,
Vigan City, Ilocos Sur

a. One (1) piece nylon screen filter to dramatize the star effect on silhouette in daylight condition. This material is noticeably more glossy than the silk. The reflection of the lightwave requires the camera setting to lessen the exposure time to avoid it from being over exposed.

Figure 11.1
Filter:1 pc. Nylon screen
Aperture: F/10
Speed:1/4000
ISO:100
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.17
Descriptive Rating: Very Satisfactory

b. Two (2) pieces of nylon screen filter to dramatize the star effect on silhouette in daylight condition. The effect on two layers was harsh on the lighting while the points of the star was distorted.

Figure 11.2
Filter:2 pcs. Nylon screen
Aperture: F/10
Speed:1/1600
ISO:100
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.83
Descriptive Rating: Very Satisfactory

This set of experiments of the improvised star filters using nylon screen will be used in the presence of multiple night lights.

Figure 12
Filter: No Filter
Aperture: F/4.5
Speed:1/25
ISO:3200
Focal Length:33mm.
Compensation:0 step

Location: Heritage Village,
M. Crisologo St.
VIgan City, Ilocos Sur

1pc. nylon screen- Star Effect on Multiple Night Lights

Figure 12.1
Filter:1pc. Nylon screen
Aperture: F/4.5
Speed:1/60
ISO:3200
Focal Length:33mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.17
Descriptive Rating: Very Satisfactory

2pcs. nylon screen- Star Effect on Multiple Night Lights

Figure 12.2
Filter:2pcs. Nylon screen
Aperture: F/4.5
Speed:1/80
ISO:3200
Focal Length:33mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.83
Descriptive Rating: Very Satisfactory

The next set of experiments of the improvised star filters using nylon screen will be used in the presence of multiple colored night lights.

Figure 13
Filter: No filter
Aperture: F/4.5
Speed:1/80
ISO:3200
Focal Length:33mm.
Compensation:0 step

Location: City Hall, Vigan City, Ilocos Sur

c. 1pc. Nylon Screen Star Effect on Multiple Colored Night Lights

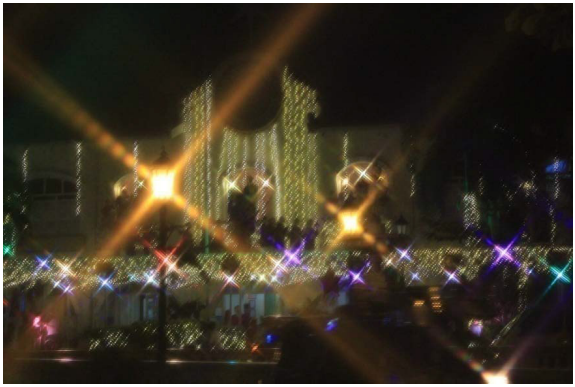

Figure 13.1
Filter:1pc. Nylon screen
Aperture: F/5.6
Speed:1/50
ISO:3200
Focal Length:49mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.17
Descriptive Rating: Very Satisfactory

d. 2pcs. Nylon Screen Star Effect on Multiple Colored Night Lights

Figure 13.2
Filter:2pcs. Nylon screen
Aperture: F/5
Speed:1/50
ISO:3200
Focal Length:42mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.83
Descriptive Rating: Very Satisfactory

The Star Filters using silk screen was also experimented with the star effect on sunset.

Figure 14
Filter: No Filter
Aperture: F/22
Speed:1/800
ISO:400
Focal Length:21mm.
Compensation:0 step

Location:
Fuerte Beach, Caoayan, Ilocos Sur

e. 1pc. nylon screen Star Effect on Sunset

Figure 14.1
Filter:1pc. Nylon screen
Aperture: F/20
Speed:1/800
ISO:400
Focal Length:45mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.00
Descriptive Rating: Very Satisfactory

f. 2pcs. nylon screen Star Effect on Sunset

Figure 14.2
Filter:2pcs. Nylon screen
Aperture: F/20
Speed:1/320
ISO:400
Focal Length:51mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.83
Descriptive Rating: Very Satisfactory

Center Spot Filters using upcycled sliding folder – in this experiment, the sliding folder prefer a used and white color. There is two (2) set of improvised center spot filter; 1) the heart shape and, 2) the circle shape.

Figure 15
Filter: None
Aperture: F/20
Speed: 1/1250
ISO:400
Focal Length:18mm.
Compensation:0 step

Location:Fuerte Beach, Caoayan, Ilocos Sur

a. Heart Shape- Romanticizing effect (Sunset). In the study, the researcher customized a heart shape to test its possibility using a used sliding folder. The used sliding folder tends to look foggier because of the scratches. The newly purchased folder has no scratches and looks clear. To achieve a foggy effect of the commercial filter, the used folder is advisable.

Figure 15.1
Filter: Heart Shape
Aperture: F/20
Speed:1/1250
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.00
Descriptive Rating: Very Satisfactory

b. Circle Shape- Romanticizing effect (Sunset)

Figure 15.2
Filter: Circle Shape
Aperture: F/20
Speed:1/800
ISO:400
Focal Length:28mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.50
Descriptive Rating: Very Satisfactory

The next set of the experiment made by an improvised center spot filter (sliding folder) using two (2) shapes like heart and circle shape.

Figure 16
Filter: None
Aperture: F/5.6
Speed:1/500
ISO:100
Focal Length:55mm.
Compensation:0 step

Location:Bantay Bell Tower
Bantay, Ilocos Sur

c. Heart Shape- Romanticizing effect (Belltower). This deliberate blurring of planes in the background, foreground, or both can produce some striking photographic and atmospheric effects (Hughes, 2010).

Figure 16.1
Filter: Heart Shape
Aperture: F/5.6
Speed:1/640
ISO:100
Focal Length:35mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.33
Descriptive Rating:
Satisfactory

d. Circle Shape- Romanticizing effect (Belltower).

Figure 16.2
Filter: Circle Shape
Aperture: F/5.6
Speed:1/640
ISO:100
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:2.33
Descriptive Rating:
Satisfactory

The same experiment of improvised center spot filter (sliding folder) using the heart to romanticized a plant.

Figure 17
Filter: No Filter
Aperture: F/5.6
Speed:1/25
ISO:100
Focal Length:28mm.
Compensation:0 step

Location:St. Augustine
Parish Church,
Bantay, Ilocos Sur

Heart Shape- Romanticizing effect (Plants)

Figure 17.1
Filter: Heart Shape
Aperture: F/5.6
Speed:1/25
ISO:100
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.33
Descriptive Rating:
Excellent

The next experiment is on silhouette motif using the circle shape center spot by an upcycled sliding folder. Hughes (2010) stated that cloud formations, can be exaggerated intimidatingly depending on what kind of lens or filter is used.

Figure 18
Filter: No Filter
Aperture: F/10
Speed:1/3200
ISO:100
Focal Length:18mm.
Compensation:0 step

Location:
Vigan Bell Tower
Vigan City, Ilocos Sur

Circle Shape- Emphasizing effect on Silhouette (Belltower). In silhouette, a fast speed darkens the image.

Figure 18.1
Filter: Circle Shape
Aperture: F/10
Speed:1/3200
ISO:100
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.00
Descriptive Rating: Very Satisfactory

For this experiment, the round shape of this center spot filter will be tested on the architectural structure. Hughes (2010) mentioned that using different shapes, colors, and lighting intensities can be totally changed through the use of specific optical modifiers.

Figure 19
Filter: None
Aperture: F/8
Speed:1/1600
ISO:400
Focal Length:18mm.
Compensation:0 step

Location:
Plaza Salcedo,
Vigan City, Ilocos Sur

e. Heart Shape- Romanticizing Effect on architectural structure. Most commercialize shape for center spot filters are round.

Figure 19.1
Filter: Heart Shape
Aperture: F/8
Speed:1/1600
ISO:400
Focal Length:18mm.
Compensation: 0 step

Evaluation Result
Mean Rating:3.50
Descriptive Rating:
Excellent

In the next experiment, the improvised center spot filter was tested for a flower subject.

Figure 20
Filter: No Filter
Aperture: F/5.6
Speed:1/60
ISO:100
Focal Length:18mm.
Compensation:0 step

Location: St. Augustine
Parish Church,
Bantay, Ilocos Sur

Circle Shape- Emphasizing effect on flower (long shot)

Figure 20.1
Filter: Circle Shape
Aperture: F/5.6
Speed:1/60
ISO:100
Focal Length: 18mm.
Compensation:0 step

Evaluation Result
Mean Rating: 3.50
Descriptive Rating:
Excellent

Similar to the previous experiment, improvised center spot filter was tested in a close-up shot of a flower.

Figure 21
Filter: No Filter
Aperture: F/5.6
Speed:1/125
ISO:100
Focal Length: 48mm.
Compensation:0 step

Location:St. Augustine
Parish Church,
Bantay, Ilocos Sur

Circle Shape- Emphasizing effect on flower (close-up)

Figure 21.1
Filter: Circle Shape
Aperture: F/5.6
Speed:1/125
ISO:100
Focal Length:48mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.50
Descriptive Rating:
Excellent

The exploration of upcycling different materials for improvised center spot filter. The following experiment used the base of a sports drink plastic bottle (Powerade).

Figure 22
Filter: None
Aperture: F/5.6
Speed:1/500
ISO:100
Focal Length:55mm.
Compensation:0 step

Location: Bantay Bell Tower,
Bantay, Ilocos Sur

f. Circle Shape- Light Diffraction Effect on architectural structures

Figure 22.1
Filter: Plastic Bottle
Aperture: F/5.6
Speed:1/500
ISO:100
Focal Length:55mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.50
Descriptive Rating:
Excellent

The improvised center spot filter was tested into a different situation of lighting, the sunset.

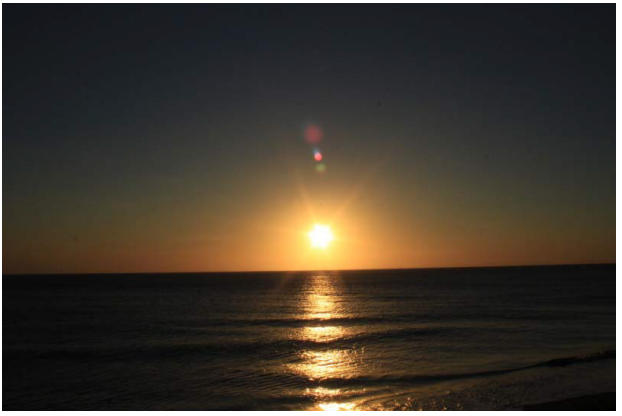

Figure 23
Filter: No Filter
Aperture: F/22
Speed:1/800
ISO:400
Focal Length:21mm.
Compensation:0 step

Location:
Fuerte Beach,
Caoayan, Ilocos Sur

Circle Shape- Ornamental Diffraction effect (Sunset). Small aperture made the bottle image looks sharper combined with an average speed of shutter, and a longer focal length.

Figure 23.1
Filter: Plastic Bottle
Aperture: F/16
Speed:1/100
ISO:400
Focal Length:37mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.50
Descriptive Rating:
Excellent

Circle Shape- Light Diffraction effect (Sunset). The details of the bottle are distorted and becomes blurred by using small aperture, fast speed, and a wider focal length.

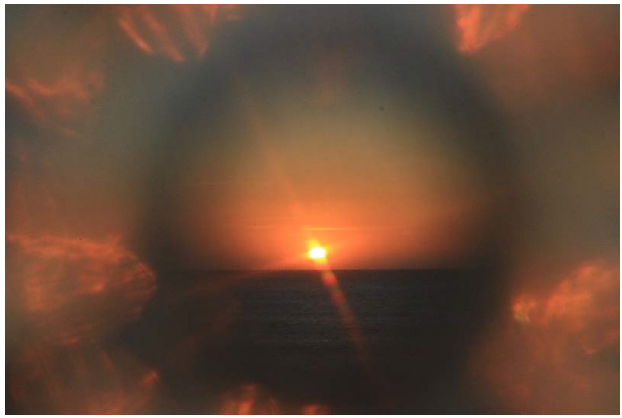

Figure 23.2
Filter: Plastic Bottle
Aperture: F/16
Speed:1/250
ISO:400
Focal Length:20mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.50
Descriptive Rating:
Excellent

g. Circle Shape- Heavy Diffraction effect (Sunset). Wider focal length makes the sun looks near using a small aperture, and a fast shutter speed.

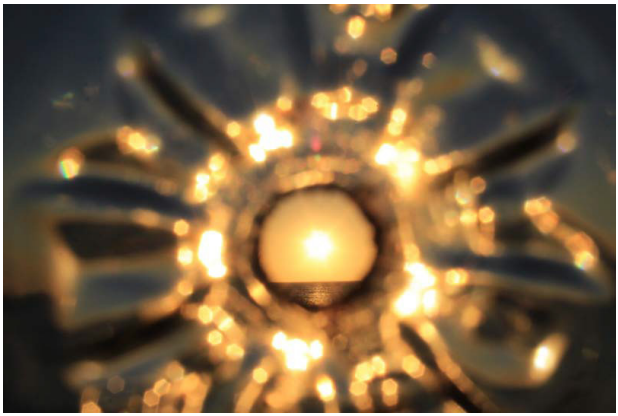

Figure 23.3
Filter: Plastic Bottle
Aperture: F/22
Speed:1/800
ISO:400
Focal Length:25mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.50
Descriptive Rating:
Excellent

Circle Shape- Blurry Diffraction effect (Sunset). A longer focal length made the sun afar combined with a small aperture, and an average shutter speed.

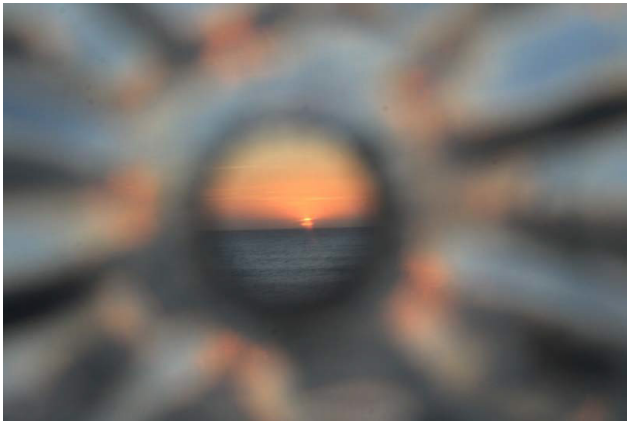

Figure 23.4
Filter: Plastic Bottle
Aperture: F/16
Speed:1/100
ISO:400
Focal Length:37mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.33
Descriptive Rating:
Excellent

The majority of the results from the outputs of the center spot filters was excellent in the evaluation (3.26 – 4.00). In the experiment of center spot filter using sliding folder and plastic bottle cut with two (2) different shapes like circle and heart, different combination was tested in different shots like close-up and long shot. Same filters were tested in the sunset and daylight conditions. Only the improvised center spot filter in circle shape exposed in a daylight and sunset condition was rated very satisfactorily (2.61-3.25) in the evaluation. The rest of the experimentation of the sliding folder, and plastic bottle as a center spot filter attained a perfect (4.00) rating in the achievement of expected result of the filter according to its purpose.

V. Improvised Rainbow Filter – is made of celluloid acetate painted with a small hand-painted rainbow. It is important that the acetate is clear from scratches.

Figure 25
Filter: No Filter
Aperture: F/10
Speed:1/1250
ISO:400
Focal Length:18mm.
Compensation:0 step

Location: Founder's Plaza, University of Northern Philippines, Vigan City, Ilocos Sur

a. Rainbow – Faded Effect. A large aperture blurs the rainbow image. It tend to give an appeal like the rainbow is vanishing.

Figure 25.1
Filter: Rainbow
Aperture: F/3.5
Speed:1/4000
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.33
Descriptive Rating:
Excellent

b. Rainbow – Glowing Effect. Testing the filter with a bigger aperture made the rainbow image more visible, and looks like glowing.

Figure 25.2
Filter: Rainbow
Aperture: F/5.6
Speed:1/4000
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.33
Descriptive Rating:
Excellent

c. Rainbow - Vivid Effect, is set by a small aperture. Notice that the rainbow image becomes sharper and vibrant. Setting is good to exaggerate the rainbow in the composition.

Figure 25.3
Filter: Rainbow
Aperture: F/10
Speed:1/1250
ISO:400
Focal Length:18mm.
Compensation:0 step

Evaluation Result
Mean Rating:3.67
Descriptive Rating:
Excellent

There are only three (3) experimentations done in the production of star filter; 1) faded effect, 2) glowing effect and, 3) vivid effect. The outputs are all rated excellent (3.26 – 4.00) in the evaluation. In the area of focus, all the outputs achieved a perfect rating of 4.00 from the evaluators. The faded and vivid effect were rated excellent in the focus and clarity while the glowing effect realized a very satisfactory rate (3.00) in the focus and clarity.

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Table 1 shows the summary of the evaluation of 53 photographs that used improvised filters from a Photography practitioner and Photography Instructor. Mean ratings were expressed into descriptive rating ranging:

3.26 to 4.00 Excellent
2.61 to 3.25 Very Satisfactory
1.76 to 2.50 Satisfactory
1.00 to 1.75 Poor

Table 1. Summary of the Evaluation

		AREA OF FOCUS				
IMPROVISED FILTER **Expected result of the filter were achieved according to its purpose**		**Quality of the filter effects to the photography**	**Photo taken at proper exposure, focus, and clarity**		**Mean**	**Descriptive Rating**
1	Orange Filter 1 – Warm Effect	4.00	3.50	3.50	3.67	Excellent
2	Orange Filter 2 - Warm Effect	3.00	3.00	3.00	3.00	Very Satisfactory
3	Orange Filter 3 - Warm Effect	2.00	2.50	3.00	2.50	Satisfactory
4	Blue Filter 1 – Cool Effect	4.00	3.50	3.50	3.67	Excellent
5	Blue Filter 2 – Cool Effect	3.00	2.50	2.50	2.67	Very Satisfactory
6	Blue Filter 3 – Cool Effect	2.00	2.00	2.50	2.17	Satisfactory
7	Green Filter 1 – Refreshing Effect	4.00	3.50	3.50	3.67	Excellent
8	Green Filter 2 – Refreshing Effect	3.00	3.00	3.00	3.00	Very Satisfactory
9	Green Filter 3 – Refreshing Effect	2.00	2.00	2.50	2.17	Satisfactory
10	Red Filter 1 – Intense Effect	4.00	3.50	3.50	3.67	Excellent
11	Red Filter 2 - Intense Effect	3.00	2.50	2.50	2.67	Very Satisfactory
12	Red Filter 3 - Intense Effect	2.00	2.00	2.50	2.17	Satisfactory
13	Red & Green- Romantization Effect	4.00	3.50	3.50	3.67	Excellent
14	Orange & Red- Intense Effect	4.00	2.50	2.50	3.00	Very Satisfactory
15	Blue & Green- Cool Effect	4.00	3.50	3.50	3.67	Excellent
16	Orange & Green- Intense effect	4.00	3.00	3.00	3.33	Very Satisfactory
17	Red, Orange & Green- Intense Effect	4.00	2.50	2.50	3.00	Very Satisfactory
18	Red, Blue & Green- Refreshing Effect	4.00	3.00	3.00	3.33	Very Satisfactory
19	Orange, Blue & Green- Refreshing Effect	3.00	3.00	3.00	3.00	Very Satisfactory
20	Circle Shape- Emphasizing effect (Belltower)	1.00	2.50	3.50	2.33	Satisfactory

21	Heart Shape- Romanticizing effect (Belltower)	1.00	2.50	3.50	2.33	Satisfactory
22	Circle Shape- Diffraction effect (Belltower)	1.00	2.00	3.50	2.17	Satisfactory
23	2pcs. silk screen- Star Effect on Sunset	4.00	2.50	2.00	2.83	Very Satisfactory
24	1pc. silk screen Star Effect on Sunset	4.00	2.50	2.50	3.00	Very Satisfactory
25	1pc. nylon screen- Star Effect on Sunset	4.00	2.50	2.50	3.00	Very Satisfactory
26	2pcs. nylon screen- Star Effect on Sunset	4.00	2.50	2.00	2.83	Very Satisfactory
27	2pcs. silk screen- Dramatize Star Effect on Silhouette in Daylight Condition	4.00	3.00	2.50	3.17	Very Satisfactory
28	1pc. silk screen- Dramatize Star Effect on Silhouette in Daylight Condition	4.00	3.00	2.50	3.17	Very Satisfactory
29	1pc. Nylon screen- Star Effect on Silhouette in Daylight Condition	4.00	3.00	2.50	3.17	Very Satisfactory
30	2pcs. Nylon screen- Star Effect on Silhouette in Daylight Condition	4.00	2.50	2.00	2.83	Very Satisfactory
31	2pcs. silk screen Star effect on Multiple Night Lights	4.00	3.00	1.50	2.83	Very Satisfactory
32	1pc. silk screen Star effect on Multiple Night Lights	4.00	3.00	2.50	3.17	Very Satisfactory
33	1pc. nylon screen- Star Effect on Multiple Night Lights	4.00	3.00	2.50	3.17	Very Satisfactory
34	2pcs. nylon screen- Star Effect on Multiple Night Lights	4.00	2.50	2.00	2.83	Very Satisfactory
35	2 pcs. silk screen- Star Effect of Single Night Lights	4.00	2.50	2.00	2.83	Very Satisfactory
36	1pc. silk screen- Star Effect of Single Night Lights	4.00	3.00	2.50	3.17	Very Satisfactory
37	1pc. Nylon screen Star Effect on Multiple Colored Night Lights	4.00	3.00	2.50	3.17	Very Satisfactory
38	2pcs. silk screen- Star Effect on Multiple Colored Night Lights	4.00	2.50	2.00	2.83	Very Satisfactory
39	Circle Shape- Emphasizing effect on Silhouette (Belltower)	4.00	2.50	2.50	3.00	Very Satisfactory
40	Circle Shape- Emphasizing effect on flower (close-up)	4.00	3.00	3.50	3.50	Excellent
41	Circle Shape- Emphasizing effect on flower (long shot)	4.00	3.00	3.50	3.50	Excellent

42	Heart Shape- Romanticizing effect (Plants)	4.00	2.50	3.50	3.33	Excellent
43	Heart Shape- Romanticizing effect(Sunset)	4.00	3.00	3.50	3.50	Excellent
44	Circle Shape- Romanticizing effect (Sunset)	3.00	2.00	3.50	2.83	Very Satisfactory
45	Circle Shape- Heavy Diffraction effect (Sunset)	4.00	3.00	3.50	3.50	Excellent
46	Circle Shape- Blurry Diffraction effect (Sunset)	4.00	3.00	3.00	3.33	Excellent
47	Circle Shape- Ornamental Diffraction effect (Sunset)	4.00	3.00	3.50	3.50	Excellent
48	Circle Shape- Light Diffraction effect (Sunset)	4.00	3.00	3.50	3.50	Excellent
49	Rainbow- Faded effect	4.00	2.50	3.50	3.33	Excellent
50	Rainbow-Glowing effect	4.00	3.00	3.00	3.33	Excellent
51	Rainbow- Vivid Effect	4.00	3.50	3.50	3.67	Excellent
52	Heart Shape- Romanticizing Effect	4.00	3.00	3.50	3.50	Excellent
53	Circle Shape- Light Diffraction Effect	4.00	3.00	3.50	3.50	Excellent

CONCLUSIONS

The single piece of an **Improvised Color Filter** was highly recommended to set a different drama and ambience in photography. To intensify the level of the Chroma, just add more pieces to make the scene much intense. The three layers or three (3) pieces will make the ambience dark. These filters can be used in setting a simple classroom cinematography because they are made of affordable materials. **Improvised Star Filters** are also highly recommended because these materials are abundant in the local market. Best effects were achieved with only layer of filter. Putting two (2) pieces makes more rays of stars but affects the general quality of the photograph especially the clarity. **Improvised Center Spot Filters** are highly recommended to use because they were an excellent filter to emphasize drama to the selected subject. This study gives the chance to explore other different possible shapes for center spot filters. These filters are more difficult to make because it requires an extra care in the cutting skills to prevent possible injuries. The different effects of the **Improvised Rainbow Filters** such as the faded effect, glowing effect and the vivid effect are highly recommended for Digital Single Lens Reflex Camera (DSLR) in the field of landscape photography.

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