



## Utilization of Digital Camera Simulation Media

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**Abstract** – At the Photo Media Development course, students has difficulty in understanding the materials related to the aperture, shutter and ISO. Meanwhile, the setting of the three combinations of those is the basis of photography. This research conducted by implementing the classroom activity research as the methodology and has been done in 2 cycles. The subject of the study was 47 students from class 2013. The procedure consisted of four stages in each cycle: planning, action, observation and reflection. Data in this research collected from the observation on the field and test for the subject, which were described descriptively to enrich the result of every cycle obtained in this research. This study aims to define the improvement of students' understanding of the materials related in the development of photo media course. The result of the preliminary study for this research showed the average score that was 40.10. In the first cycle of the research, the students' average score was 68.55. In the second cycle, the learning outcome was increase to the point where the students' average score was 83.57. The conclusion draw as the result from the two cycle of this research is there is improvement in the students' learning outcome in this research, happened in every cycle in this research.

**Keywords:** Utilization, Digital Camera Simulation

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### I. INTRODUCTION

Learning is an essential process in the change of human behavior as well as every matter thought and done by humans. Learning takes an important role in the human development, nature, manner, belief, personality goal, and human perception. Therefore, in order to achieve those objectives, human need to do learning and teaching activities. The process of the teaching learning activity would be the factor in determining the success in reaching the education goals. The development can be reached supported by many factors. It also affects the learning outcome development. Learning outcome used as the standard on how far the students understanding the materials taught by the lecturer. Thus, learning outcome is an important aspect in the teaching learning activity.

The process of teaching learning activity basically is the process of communication, which is the process to deliver message from the source by using particular network or media to the receiver. The message, the source, the media, and the receiver are the components of communication process. The messages that will be communicated consist of lesson based on the curriculum. The source of the message could be the lecturer, students, people, writer, and media producer. The network would be the education media and the receiver could be the students or even the lecturer (Sadiman, 2007: 11-12)

Based on the observation, the problem appeared on the development of photo media course is that the students hardly understanding the explanation of the lesson about the aperture, ISO, speed, time limitation, and the camera limitation. The students were also not so active in the teaching learning activity and there was no active role in the class interaction yet. If those problems are not solved sooner, it would be the barrier in achieving the learning objectives in teaching learning process and the students will not be able to master the lesson. The impact of this problem which about the teaching learning process that is less optimal is the students' understands in related lesson; ISO, speed, aperture and so on, tend to be quite low.

Those problems surely need to be solved, that is why a solution on the use of camera simulation on teaching learning process should be found. Within this media hopefully the materials delivered could increase the new interest, enhance the motivation and as the trigger for teaching learning activity, and even affect the students psychologically (Hamalik, 1986:23) Based on the problems stated before, this classroom activity research needs to be conducted with the title: The Use of Camera Simulation to Improve the Understanding on the Material of Photo Media Development course.

## II. RESEARCH METHOD

This research is a classroom activity research where is about an observation towards a teaching learning activity as an activity which is purposely implemented and happened in the classroom in the same time. (Arikunto, 2008:3) According to Aqib (2008:16), the characteristic of classroom activity research are:

1. Based on the problem experienced by the lecturer instructionally.
2. There is a collaboration on the implementation
3. The researcher acts as well as the practitioner who will done the reflection
4. The goal is to overcome and to enhance the quality of the instructional practice
5. Implemented in stages and some cycles

This research conducted for year 2013 on the department of Curriculum and Technology of Education, the faculty of Education Major, State University of Surabaya.

There are some kinds of classroom activity research which is still implemented in the education field until now, such as Kemmis and Mc. Taggart type which is consist of some cycles, where in every cycle comprised of four stages that are about planning, acting, observing, and reflecting:

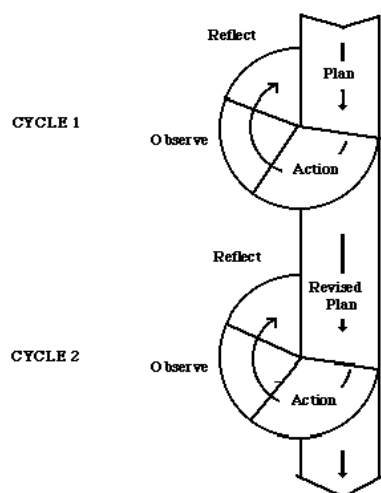


Figure 1: Cycle performance of Kemmis dan Mc. Taggart model (Arikunto, 2006:74)

Therefore, these are the steps conducted in this research consist of pre-cycle, cycle I, and cycle II, as explained here:

### 1. PRE-CYCLE

In the implementation of this cycle, the teaching learning activity were still purely applied the conventional method that is about explanation and demonstration method using DSLR camera.

### 2. CYCLE I

#### a. PLANNING

The activities done in this stage were about:

1. Doing the first observation to get to know on the students' understanding.
2. Preparing the lesson plan
3. Preparing the media that is the camera simulator
4. Preparing the research instrument which is the scoring sheet and observation sheet.
5. Preparing the multimedia tools used in the class such as LCD and computer/notebook.



b. ACTING

In this stage, the lecturer did the teaching learning activity which already planned before. The steps of the teaching learning activity implemented were about:

1. To start the teaching learning activity by starting the lesson, giving out the goals of the main lesson about ISO, speed and aperture.
2. To explain the learning objectives that would be achieved in the teaching learning activity.
3. To give the steps that would be done in the teaching learning activity by using camera simulation media, that are:
  - a. The lecturer providing the media that is the camera simulator
  - b. The lecturer giving the base information to the students about the process the learning activity
  - c. The students doing the practice using the camera simulator
  - d. The lecturer giving out questions related to the camera simulator showed to the students
  - e. The lecturer giving out the chances for the students to answer the questions.
  - f. The students are asked to summarize what they have learnt by using camera simulator
  - g. The lecturer giving out the chance to the students to ask related to the materials they don't understand yet.
  - h. The students are asked to give a feedback on the teaching learning activity they just had.
4. To give questions to the students to get the learning outcomes of the students' understanding of the materials they had learnt.

c. OBSERVATION

In this stage, the researcher observed the process of learning activity happened in the class in order to obtain the data needed in implementing the camera simulation media.

d. REFLECTION

1. The researcher analyzed the observation result and evaluated it to draw the hypothesis on the teaching learning activity of the first cycle.
2. The researcher analyzed and discussed the result of the teaching learning process of the first cycle to plan the corrective on the second cycle.

3. CYCLE II

The second cycle was about the correction of the first cycle. The reflection result used as the standard about the need of the next cycle in this research. Basically, all activities in the second cycle were mostly the same as the first cycle. The second cycle was about the correction of the first cycle, based on the reflection result of the first cycle.

a. PLANNING

Activities done in this stage were:

1. First observation to know about the students' understanding
2. Preparation of the lesson plan
3. Preparation of the media that was the camera simulator
4. Preparation on the research instruments that were the scoring sheet and the observation sheet.
5. Preparation of the multimedia tools needed, such as: LCD and computer/notebook.

b. IMPLEMENTATION

In the action or the implementation stage, the lecturer did the teaching learning activity as planned before. The steps of the teaching learning activities were about:

1. To start the teaching learning activity by starting the lesson, giving out the goals of the main lesson about ISO, speed and aperture.
2. To explain the learning objectives that would be achieved in the teaching learning activity.
3. To give the steps that would be done in the teaching learning activity by using camera simulation media, that are:
  - a. The lecturer providing the media that is the camera simulator
  - b. The lecturer giving the base information to the students about the process the learning activity
  - c. The students doing the practice using the camera simulator
  - d. The lecturer giving out questions related to the camera simulator showed to the students
  - e. The lecturer giving out the chances for the students to answer the questions.
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  - g. The lecturer giving out the chance to the students to ask related to the materials they don't understand yet.
  - h. The students are asked to give a feedback on the teaching learning activity they just had.

4. To give questions to the students to get the learning outcomes of the students' understanding of the materials they had learnt.
5. **OBSERVATION**

In this stage, the researcher observed the process of learning activity happened in the class in order to obtain the data needed in implementing the camera simulation media.

6. **REFLECTION**

The reflection in this stage conducted to make the teaching learning activity better by using the camera simulation media which hopefully is able to enhance the learning outcomes of the students.

### III. RESULT

#### 1. FIRST CYCLE RESULT DISCUSSION

In the teaching learning activity before the implementation of the camera simulation media, the students learning outcomes were far from the targeted score that was 75. The students' average score was reaching 40,10. After the implementation of the camera simulation media in the first cycle, there was an improvement in the students' average score that was 68,55.

In the implementation of the first cycle, the students understanding on ISO, aperture, and speed increased by using the camera simulation media. In the first cycle the lecturer applied the camera simulation media so that the students interested to the class. Those matters made some of students were excited to listen to the lecturer and follow the class. While basically the implementation of the first cycle was still need to be improved. Based on the observation result could be concluded that most students interested to master the ISO, speed and aperture materials using the learning media that is the camera simulation. Thus, the lecturer should give motivations so that the students will to continue learn on home. So the students will be able to master the material and share the part related to the material where is hard to understand to the lecturer. There are 32 students achieved the learning objectives and 15 students were not yet succeed in the average score 68,55.

The lecturer supported by giving motivation to the students which still not confident yet to ask a question, and the lecturer gave the homework so that the students could also learn on their home. Moreover, the lecturer also assisted the students which did still not understand the materials well by giving one by one questioning section in the teaching learning process to know the students' understanding.

The activities in the first cycle needed to be revised to be exact on its teaching learning process by extending the duration while using the camera simulation media. The lecturer needs to motivate and support the students in learning activity so that the students' ability in learning the materials by using the camera simulation media could be increased. Thus, the result of the learning outcomes in the pre-cycle compared to the first cycle by using the camera simulation media could be seen on this table below.

TABLE 1  
 COMPARISON OF STUDENT LEARNING OUTCOMES PRE CYCLE AND CYCLE I

No	CATEGORY RATING	PRE CYCLE	CYCLE I
1	LOWEST SCORE	39	45
2	HIGHEST SCORE	79	83
3	AVERAGE SCORE	40,10	68,55

The table stated about the students' lowest score before and after the use of the camera simulation media. In the pre-cycle teaching learning activity, the students' lowest score was only 39 and the highest score was 79. While after using the camera simulation media for ISO, speed, and aperture lesson, the students' lowest rank increased to 45 and the highest score improved to 83. The students' average score increased from 40,10 to 68,55.

#### 2. SECOND CYCLE RESULT DISCUSSION

In the second cycle, the teaching learning activity was also used camera simulation media based on the reflection stage in the first cycle that was stated that the students were still not completely understand the concept. Hence, in the second cycle the duration of the use of camera simulation media was extended. It has good impact on the students' understanding on the concept to comprehend the lesson. There were still noises in the class so the lecturer gave a motivation to the students by giving more time to the students to think as well as individually and even a chance to learn more by using the camera simulation media.

The second cycle was successfully implemented based on the result of the observation sheet as well as the test result of the concept mastery of ISO, speed, and aperture which was increased and accomplished the success standard in the research. The improvement of concept mastery by the students on the aspect of cognitive in the second cycle by using the camera simulation media showed the students' lowest score increased compared to the first cycle that was from 45 to 55, the highest score also increased from 83 to 92, and the average score improved from 68,55 to 83,57. This happened because the students were used to understanding the material since the first cycle, so that when it came to the second cycle's material the students were able to follow the lesson easily and concentrated well, confirmed by the fact that the students were willing to ask a question and express their opinions. It could be concluded that the students become interested in the learning activity by the camera simulation activity used by the lecturer.

TABLE 2  
 COMPARISON OF STUDENT LEARNING OUTCOMES PRE CYCLE, CYCLE I AND CYCLE 2

No	CATEGORY RATING	PRE CYCLE	CYCLE I	CYCLE II
1	LOWEST SCORE	39	45	55
2	HIGHEST SCORE	79	83	92
3	AVERAGE SCORE	40,10	68,55	83,57

From the description above could be concluded that the students' learning outcomes on the lesson of aperture, speed, and ISO could be increased by using the camera simulation media and it can improves the understanding on its concept for the students of year 2013 in the Curriculum and Technology of Education Departmen, FIP, UNESA.

The result of exercise shown as figure below:

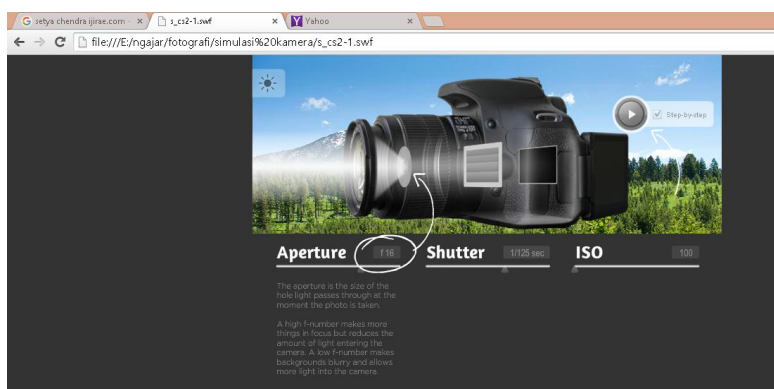


Figure 2 : The use of Aperture F16, Shutter 1/125, ISO 100

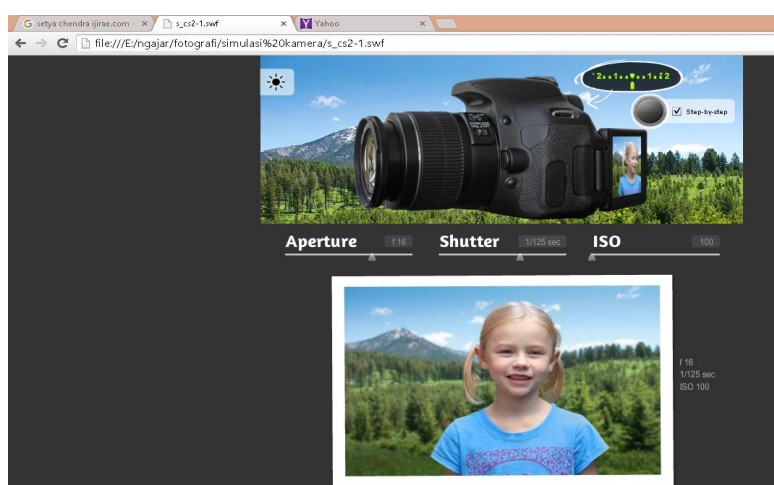


Figure 3 : The result of exercise, F16, S 1/125, ISO 100



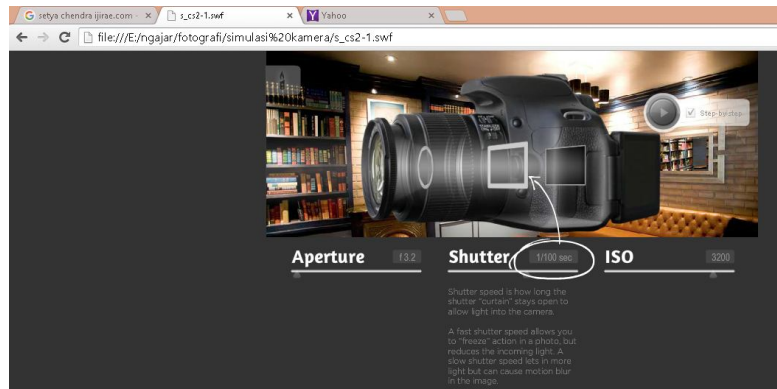


Figure 4 The use of Aperture F32, Shutter 1/100, ISO 3200

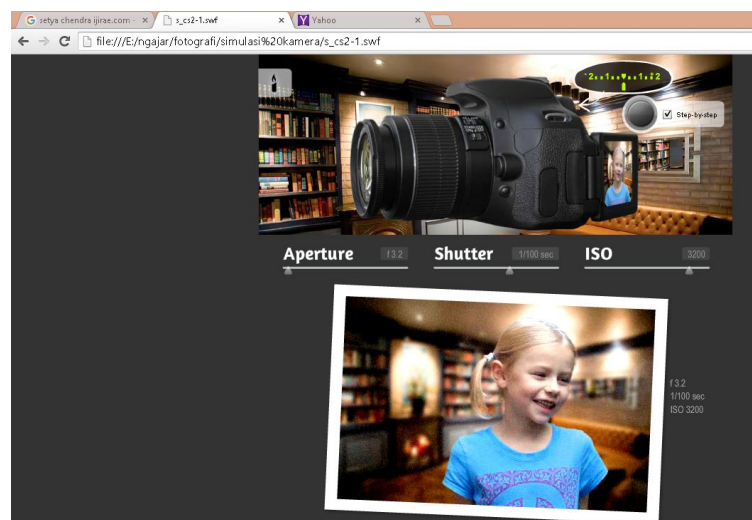


Figure 5 : The result of exercise, F32, S 1/100, ISO 3200

### 3. RECOMMENDATION

Based on the result and the discussion about the data obtained in this research, it can be concluded that the camera simulation media is able to increase the understanding on the lesson of ISO, speed, and aperture, so that it also can improves the understanding on the concept of photography. It can be seen from the improvements of students' test score about their understanding. In the first cycle the average score was 68,55, while in the second cycle the average score was 83,57. Overall, this camera simulation media used in this research is a good media to increase the understanding on the concept of the lesson of aperture, speed, and ISO in the photo media course.

There are also recommendations as stated below:

1. The use of camera simulation media could be used as the aid in the teaching learning activity
2. The media use should be increased to optimized the students' understanding about the concept
3. The development of the camera simulation media as the learning aid is needed, realizing the technology development which keeps being more advances and the inquired of the fact that learning is everywhere anywhere.



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