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# LEARNING BASIC PHOTOGRAPHY THROUGH LEARNING OBJECT INFOGRAPHIC VIDEO

**Akhmad Sadek<sup>1</sup>**

<sup>1</sup> *Lecture of Educational Technology, Faculty of Education, Universitas Negeri Jakarta, Indonesia*

**Zuhdy HS<sup>2</sup>**

<sup>2</sup> *Lecture of Educational Technology, Faculty of Education, Universitas Negeri Jakarta, Indonesia*

**Cecep Kustandi<sup>3</sup>**

<sup>3</sup> *Lecture of Educational Technology, Faculty of Education, Universitas Negeri Jakarta, Indonesia*

## ABSTRACT

*This mixed method study aims to describe learning object infographic videos in learning basic photography. The research strategy used sequential explanatory. The research data taken through two phases, that is quantitative and qualitative. The researcher collaborated with students in semester 3 of academic year 2018 and 2 lecturers of basic photography in the Education Technology study program, Faculty of Education, Universitas Negeri Jakarta, Indonesia. The results showed that learning object infographic videos can improve students' knowledge regarding the basis of photography and improve student skills in making learning models. Learning object infographics video can be used as one of the media during the basic photography learning process, both conventionally in the classroom or independently. This Learning object infographic video product can overcome verbalism problems in the classroom. Learning object infographics video also help Lecturers in the Educational Technology Study Program deliver basic photography subject to students.*

**KEYWORDS:** *Basic Photography, Learning Object, Infographic Video*

## INTRODUCTION

Education is one of the important aspects in human life. One of the factors that influence the creation of quality human resources is education. To improve the quality of education, learning media are needed to play an important role in the learning process (Slameto, 2015: 67). Because with the right and complete media, it will facilitate the acceptance or mastery of learning materials given to students. The expression "an image capable of representing thousands of words" explains that visual media is effective in conveying messages rather than verbally which can lead to misperceptions. Smiciklas (2012: 7) also states that the human brain able to process information in the form of images faster than text.

According to Ware in Lankow (2014: 45) someone has the opportunity to get more information through his visual system: An infographics (short for information graphics) is a type of picture that designs data, helps individuals communicate messages to their audience (Smiciklas, 2012: 3). Rajamanickam (2005: 4) in his seminal handout of infographics also explained that the combination of images, words, and numbers offers a great opportunity to improve the effectiveness of the communication process. Infographics aim to display a large collection of data in a graph that is concise, simple and more interesting and combines a large amount of information in very small space and didn't leave important facts by designing or summarizing

information regularly (Mol, 2011). Therefore Smaldino (2012) explained that visual image engineering with animated art through video can be used in learning to describe a material with complex or fast processes in a simplified form. Based on above statements, video infographics need to be developed as a learning media innovation - not only used in the fields of business, entertainment, or the mass media. Lecturers can use video infographics as a new solution to overcome communication problems in delivering learning material to students. Infographic videos that contain a combination of text, images or illustrations, sounds, music, a combination of colors, and motion can illustrate the concept of basic propagation Photography and sounds become more concrete, clear, and interesting. Thus, students will more easily absorb learning material than verbally.

This study have been combined the use of infographics video and network-based learning in basic photography subject based on the benefits offered from the breadth of access obtained by using infographics video in the skills of students of the Education Technology Study Program, Faculty of Education, Universitas Negeri Jakarta. Learning objects are elements of a new type of computer-based instruction grounded in the object-oriented paradigm of computer science (Wiley, 2000). Learning objects are a relatively more specific teaching material, focus and provide an explanation of a single concept of the material being taught (Prawiradilaga, et. Al., 2013: 151). Learning object infographics video in basic photography courses to increase the knowledge and skills of students. This learning object infographic video acts as a form of channel that serves to clarify the learning material delivered, thus helping students to understand the material and achieve learning objectives that have been optimally set. Learning objects are also efforts made to integrate learning design into e-learning. Learning objects presented in the form of interactive multimedia applications, exercises, games, and simulations. According to Sudjana and Rifai (2001), graphic media can be defined as a media that combines facts and ideas clearly, strongly, and integrated through a combination of disclosure of words and images. Daryanto (2012) defines graphic media as a visual presentation that uses dots, lines, images, writings, or other visual symbols with the intention to summarize an idea, data, or incident of Lankow, Ritchie, and Crooks (2014) defines infographics as short for "graphic information". The term infographic is used to interpret the characteristics of a media containing elements of illustration and typography (text) that display various facts. More simply, Lankow, Ritchie, and Crooks (2014) interpret infographics as media that use visual cues to communicate information. Another opinion about infographics was put forward by Krum (2013) means a larger graphic design that combines visualization of data, illustrations, text, and shared

images into a format that tells the full story. Infographics have become more like articles or speeches rather than charts. Video of this infographic learning object very important in the learning process, because with the right and complete media will complement the recipient or mastery of the learning material given to students. In realizing predetermined learning goals, the instructor can choose the use of learning media in accordance with lecture material, the number of students infrastructure used on campus.

## METHOD

This study used mixed method. Mixed method is a research approach combined qualitative research with quantitative research (Creswell, 2011: 5). According to Sugiyono (2016: 18) mixed method which is a research method by combining two research methods at once, qualitative and quantitative in a research activity, so that more comprehensive, valid, reliable and objective data will be obtained. Combining quantitative and qualitative data based on the results obtained previously from the first phase. The location of this study was conducted in class A and B of the Education Technology study program, Faculty of Education, Universitas Negeri Jakarta. The population that is target of the implementation of the research conclusions (Sukmadinata, 2007: 250). The subject of this research is the education technology students in semester 3, academic year of 2018 and 2 lecturers in basic photography subject. In this study the sample is purposive technique. This technique used in choosing until specifically based on research objectives (Sukamdinata, 2007: 251). The strategy was taken is sequential explanatory. The first phase, the researcher collected data through quantitative data, which is distributed questionnaires related to learning object infographic video simulations to 30 students in the semester 3 academic year of 2018 and 2 lecturers in basic photography subject. The second phase, the data was carried out through qualitative methods by conducted observations in class A and class B in the basic photography subjects of the educational technology study Program, Faculty of Education, Universitas Negeri Jakarta. Also interviewed 10 students included in 60 students who had answered the questionnaire. Sequential exploratory emphasizes qualitative (Mc Millan, 2010: 402).

Based on Arikunto (2006: 128) questionnaire is a number of written statements that used to obtain information from respondents in the sense of reports about the person or things he knows. The questionnaire given in this study is a closed questionnaire from the answers that have been given, the respondent only needs to answer the answers provided and each item in this questionnaire is provided with 4 alternative answers. In the alternative answers, each item in the questionnaire statement is given a weight score using a Likert scale. Carraffio and Rocco (2007) Likert scale can

produce interval measurement scales. The Likert scale was developed for the first time using 5 response points namely strongly agree, agree, not decide, disagree and strongly disagree (Likert 1932). For this reason, this study uses a Likert scale with a

value range of 1 - 4, which is not good, quite good, good and very good. Processing data obtained from the results of questionnaires calculated using the following formula:

$$\text{Average Score} = \frac{\text{Sub Total Score}}{\text{Items question total}}$$

After reading the instructions for use, learning objectives, and learning activity sheets, lecturers and researchers prepared classrooms for students to watch shows of learning object infographics video. The classrooms used laid out as comfortably as possible for students, conducive, and calm. The lecturer adjusts the seating position so that all students can watch the learning object infographic video impressions properly. Class lighting also adjusted because it helps the Learning object infographic video to be screened or projected not to be too glare because of outside sunlight or lights that are in the classroom. Furthermore, the Lecturer have been prepared all the tools needed to display this Learning object infographic video. Equipment needed, such as computer (laptop) with DVD-ROM, projection screens, LCD projectors, and loudspeakers. The duration needed for learning activities, including the pre test, one video presentation, post test, and question and answer session around 30-45 minutes (one lesson). The learning process used learning products and then this learning object infographic video was carried out according to the stages of learning activities. The following is an explanation of the phase of learning activities which consist of the preliminary, core and closing phase:

**Introduction Activity Phase**

The activity carried out by the lecturer at the introduction phase to provide an outline explanation of the material that students will learn from the broadcasting of the learning object infographic video. Furthermore, the lecturer given an explanation of what learning objectives are to be achieved after studying the material in the broadcast of the learning object infographic video. Then, the lecturer gave a pre-test to students who aimed to get information about the extent of students' initial knowledge or ability readiness before accepting new material they would learn.

**Core Activity Phase**

Learning object infographics video start airing at this stage. During the screening of learning object infographics video, lecturers and researchers play a role in supervising students so that they can watch the program well. In addition, the lecturer can pause in the middle of the video show. When the video

was paused, the lecturer gave an additional explanation on the part that is considered important before going to the next section. These learning activities are in each segment, starting from the introductory segment (apperception), the content segment, to the closing segment (conclusions and follow-up). After the video was finished airing, the lecturer and students concluded the material contained in this learning object infographic video. The lecturer have been given questions to students to find out the extent to receive the material delivered through video shows. Finally, the lecturer was gave post test question to find out the achievement of student learning outcomes after using the learning object infographic video. The results of this post test was discussed with students in the class.

**Closing Activity Phase**

The lecturers' activities at the closing phase was gave students the opportunity to reconcile the material that had been studied as a whole, starting from the results of the pre test, delivering the contents of the Learning object infographic video, the results of student answers, to the post test. The lecturer also explained what benefits students get after studying the material. In addition, lecturers also gave assignments to students as a form of follow-up learning activities.

**RESULT AND DISCUSSION**

*Learning Object Infographic Video*

Learning object infographic video basic photography learning for students of the education technology study program at Universitas Negeri Jakarta. Basic photography which is divided into two parts video. First, discuss basic shoot. Second, video discussed shooting techniques. This learning product used by students as a learning media that is new, more interesting, and more fun for them. Lecturers also used learning object infographic video products to facilitate the delivery of material in the classroom. The Learning object infographic video learning product was developed to adapt to the curriculum needs. Products are packaged into one video format in the form of versatile digital optical discs, namely DVD (Digital Versatile Disc). The format used is MPEG4 files with 1920 x 1080 (high definition / HD) aspect ratio and 25 fps frame rate.



**Picture 1. Learning Object Basic Photography (How to Close Camera)**

Source: Learning Object Video Infografis Private Document

Learning object infographics video with this format accessed or operated with the needs of system devices as follows:

- a. Learning object infographic video can be watched by rotating DVDs on a TV player connected to a television.
- b. Besides television, DVD chips also played on a computer or laptop device equipped with a DVD player. Specifications of computer equipment needed, among others:
  - 1) Windows7 operation system and Macintosh OS;
  - 2) Intel Pentium Processor Core i3 (or i5 and i7) and AMD;
  - 3) Memory or RAM 1 GB or more;
  - 4) Hard disk drive with capacity 500 GB or more;
  - 5) Monitor with resolution 1280 x 720 (1920 x 1080 better) and 24 bit color;
  - 6) Video player application, suggested Power DVD. Can also use other video players, such as Windows Media Player, VLC Player, KMP Player, etc ;
  - 7) Specifically for classical use in the classroom, it needs to be equipped

with other hardware, such as speakers and LCD projectors.

- c. The other consideration in the era of internet connection that can be accessed anytime and anywhere easily, as well as the ability of elementary school students who already have enough to operate computer devices and smart phones, then these learning products are also available online. Learning object infographics video can be accessed through an application or YouTube site with a channel or channel called "Learning Basic Photography". Videos can also be directly accessed by scanning the QR code below using the QR Reader application available on smart phones.

**Increase students’ knowledge about basic photography**

Before conducting the learning process, students of class A and B in semester 3 who took the Basic Photography subject was gave a pretest question consisting of 10 Multiple Choice Question (MCQ). The results of the pretest average value is 51.4. Then, after watching the learning object video infographic show on basic photography learning, students worked on a posttest consisting of 10 MCQ. The average result of the posttest value is 73.6.

**Table 1. The average of pretest and posttest result**

Test Phase	N	Average
Pre Test	60	51,4
Post Test	60	73,6
<b>Increase</b>		22,2%

The average of pretest and posttest results showed that students have been increased learning outcomes, which initially 51.4 increased to 73.6 (or an increase of 22.2 percent) after using the Learning object infographic video. If before the acquisition of student grades under graduation is determined by the

course, which is 65, then after using this product students able to achieve graduation. J. E. Kemp (1985: 221) in Sukiman (2012), in more detail says that videos can present information, describe a process and precisely teach skills, abbreviate and develop time, and can influence attitudes. Not only

completing the pretest and posttest, students also assessed the quality of the learning object

infographic video. The following data obtained from the results of a large group trial:

**Table 2. Learning Object Infographic Video Quality**

Aspect	N	Average
Quality of Content and Purpose	60	3,7
Quality of Learning	60	3,6
Quality of Language	60	3,7
Quality of Media Technic	60	3,7
<b>Total</b>		<b>3,68</b>

The average value of the entire learning model obtained by the results of a large group trial is 3.68. This value indicates that learning object infographic video in very good category. Based on the results of the four aspect above, this Learning object infographic video categorized very well and used in learning. Learning object infographics video also able to improve student learning outcomes, it shows that this product have been helped students to receive and understood the basic material of photography compared when using powerpoint presentation. The results of the quality score with the characteristics of the Learning object infographic video media itself, the motion audio-visual media is able to convey the whole learning message more simple and interesting way, made it easier for students to understand the material. The existence of an element of animation also appropriate for conveying the principle of basic photographic displacement that contains elements of motion. Below this is the result of student interviews related to basic photography learning objects

*Easy to understand about basic photography, when I watched infographic video.* [JK, student, 2018].

*I felt provide infographic videos to students is the best way to make easy for them to receive the lesson.* [AL, Lecture, 2018]

*I interested with basic photography lesson because there are many elements of stories and examples such as familiar to students' daily life.* [JF, student, 2018]

*I felt the knowledge about photography has been increased* [AN, student, 2018]

The statement above explain infographics are often remarkable and this makes them easier to share (Kukral, 2012). Design for information offers basic learning methods and graphics for visual presentation of information (Meirelles, 2013) Infographic is a group of graphs that visualize a stack of information or infographic information.

*I liked the animation shows in Learning object infographic video* [DS, student, 2018]

*I thought this learning model is a new experience for me. Because I haven't use it before* [TA, student, 2018]

Some of the things mentioned above Sadiman's statement (2008: 17-18) in his book about the use of learning media, such as visual media able to overcome verbalism problems during the learning

process, and able to provide the same and new learning experiences for students, because of that the students' interested to learn. Based on the results of the preest, posttest, and interview shown that students felt amazed in learning object infographics video. In addition, the use of infographics video increased their knowledge regarding basic photography. Otherwise, the video is a way for students and teachers to communicate with each other. As Educational Technology Students, they will give knowledge about the use of technology in the future. For this reason, using infographics video is able to train students' skills in create learning models. As well as providing innovations to lecturers to increase student interest and motivation to learn in the classroom

**DISCUSSION**

The results of the above findings indicated the definition of Uwes related to learning objects which are relatively more specific teaching materials and focus have been seen from student statements. The quality of content and material from infographics video able to increase the attractiveness of students towards basic photography learning. Meanwhile, Videos is an effective medium for information transfer in today's world. In web searches, videos are preferred 53 times more than a normal website for information (Kalinia 2014). Therefore the results of the pretest and posttest that have been given to students' shows that through video students able to improve their knowledge and easy to understood information. Because the purpose of infographics in accordance with Smiciklas (2012) is to convey the message more concisely. The use of video as a teaching device in the College and University Campuses has reached a tipping point that is why the new technology is being pushed over the edge from popular to pervasive (Sonicfoundry, 2013: 1). This can be proven from the revelation of TA related to new experiences in the classroom using learning object video infographics capable of increasing their knowledge regarding technology. Delil (2017) shows that infographics, which is provide everyday life, provide us with a faster understanding of the environment we are living in or the information we read.

The statement is in accordance with the results of interviews with lecturers which made it easier for them to receive material because the

infographic facilitated students to do so. Teaching 'into camera' requires adjustment of teaching practices and developing new sets of teaching skills (Guo, Kim, & Rubin, 2014). However, the lecturer able to provide a new learning atmosphere for students. Therefore, the knowledge of acquiring, representing, and manipulating knowledge in almost all disciplines (Kereluik, Fahnoe, & Karr, 2013: 132). For this reason, basic learning photography through learning object infographic videos can improve students' knowledge about photography and increase their interest in the use of technology. So that they are able to develop skills in making technology-based learning models.

## CONCLUSION

Learning object infographic video for basic photography for students of the Educational Technology study program, Faculty of Education, Universitas Negeri Jakarta. Learning object video infographics also have the advantage of improving student learning outcomes, helping lecturers in delivering learning material in the classroom, and making it easier for students to understand the material. Learning object infographics video as a new format for learning media also able to increase students' interest in learning because they provide a new and enjoyable learning experience for them. It helped lecture to increasing learning achievement of students'. The enthusiasm of students who are very visible when using the learning model. Thus, the Learning object infographic video can be used as one of the media during the basic photography learning process, both conventionally in the classroom or independently. It can overcome verbalism problems in the classroom. And also helped lecturers to delivering Basic Photography material to students.. Learning object infographics video can be used as reference material that can be considered by lecturers of Education Technology study programs or students who want to develop similar learning products.

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