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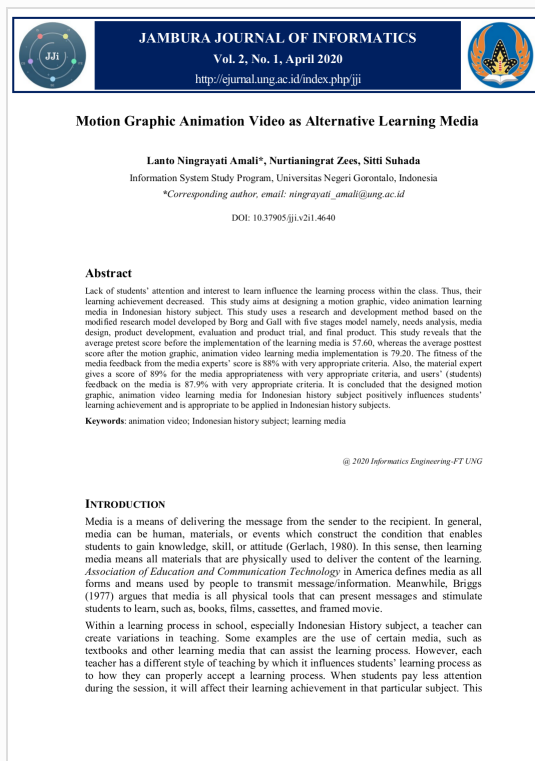# Digital Receipt

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Motion Graphic Animation Video as Alternative Learning Media

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Abstract
Lack of students' attention and interest to learn influence the learning process within the class. Thus, their learning achievement decreased. This study aims at designing a motion graphic, video animation learning media in Indonesian history subject. This study uses a research and development method based on the modified research model developed by Borg and Gall with five stages model namely, needs analysis, media design, product development, evaluation and product trial, and final product. This study reveals that the average pretest score before the implementation of the learning media is 57.60, whereas the average posttest score after the motion graphic, animation video learning media implementation is 79.20. The fitness of the media feedback from the media experts' score is 88% with very appropriate criteria. Also, the material expert gives a score of 89% for the media appropriateness with very appropriate criteria, and users' (students) feedback on the media is 87.9% with very appropriate criteria. It is concluded that the designed motion graphic, animation video learning media for Indonesian history subject positively influences students' learning achievement and is appropriate to be applied in Indonesian history subjects.
Keywords: animation video; Indonesian history subject; learning media

INTRODUCTION

Media is a means of delivering the message from the sender to the recipient. In general, media can be human, materials, or events which construct the condition that enables students to gain knowledge, skill, or attitude (Gerlach, 1980). In this sense, then learning media means all materials that are physically used to deliver the content of the learning. *Association of Education and Communication Technology* in America defines media as all forms and means used by people to transmit message/information. Meanwhile, Briggs (1977) argues that media is all physical tools that can present messages and stimulate students to learn, such as, books, films, cassettes, and framed movie.

Within a learning process in school, especially Indonesian History subject, a teacher can create variations in teaching. Some examples are the use of certain media, such as textbooks and other learning media that can assist the learning process. However, each teacher has a different style of teaching by which it influences students' learning process as to how they can properly accept a learning process. When students pay less attention during the session, it will affect their learning achievement in that particular subject. This

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Within a learning process in school, especially Indonesian History subject, a teacher can create variations in teaching. Some examples are the use of certain media, such as textbooks and other learning media that can assist the learning process. However, each teacher has a different style of teaching by which it influences students' learning process as to how they can properly accept a learning process. When students pay less attention during the session, it will affect their learning achievement in that particular subject. This

is proven by a study in 2017 in Indonesian history subject where students who attain the achievement standard is only 15.43%, whereas the proportion of students, whose score is below the standard, measures at 79.64% (Zess, 2018). Subakti (2010) states that currently, history learning is problematic due to lack of theory utilization, lack of imagination, and state-oriented textbooks and curriculum as well as the intention to not paying attention to globalization phenomena and their historical background. On the other hand, history subject provides more theory than practice. Thus students are bored and pay less attention during the learning process. Therefore, the utilization of technology, especially learning media can assist the teacher in facilitating students' learning.

Learning with technology has become an important thing for today's schools. All over the world, either government, education system, researchers, teachers, or parents, consider technology as an important element of education (Eady, 2013). Technology is always a part of the teaching and learning environment as well as the teacher's professional toolbox. In other words, a source helps the teacher to facilitate students' learning. Motion graphics animation video is one of them. Curran (2000) defines motion graphics as a technique that movies still images; thus, objects appear to be dynamic and interesting. There are two methods in this technique, namely my moving images, and combine picture sequence with continuity. In its creation, motion graphic is an important element to keep the viewers' interest.

The term motion graphic was first used by John Withney, a famous animator, in 1960. Saul Bass was the first person who has extraordinarily utilized the motion graphic in his work (Yu, 2008). Motion graphics are made with video or animation technology and also by creating a motion hallucination or changing the appearance of visual factors. When it is used in multimedia projects, motion graphic is usually followed by sound. This type of graphic usually appears in electronic media. The existence of learning media in the form of motion graphics animation video can increase students' interest in a subject, which implicates the addition or increase of students' knowledge on that subject and the students' grade on that particular subject. Ntobuo et al. (2018) argue that learning media is one of the tools that influence the learning process. Adnan et al. (2017) insist that to attract students' learning interest, an attractive learning media is needed. The utilization of digital technology as a learning media has a better and more effective implication than others.

The objective of this study is to design a motion graphics animation video learning media for Indonesian history subjects, which can attract students' interest and can provide new teaching variation for the teachers of this subject. Also, the learning process will be more interesting due to the visualization that can help students to understand the learning materials better.

METHODS

This study uses the Research and Development (R&D) method based on the model developed by Borg and Gall (2007). This method is a process to develop a new product or improve the current, available product in an accountable way. This model has been modified into a simple, practical, and applicable model. According to Mukminan (2004), there are several things to be taken into consideration before this model is selected, such as the model is simple; it has identification, development, and evaluation elements; applicable; affordable in general learning; and it has been tested. Therefore, this model can be described through the steps provided in Figure 1.
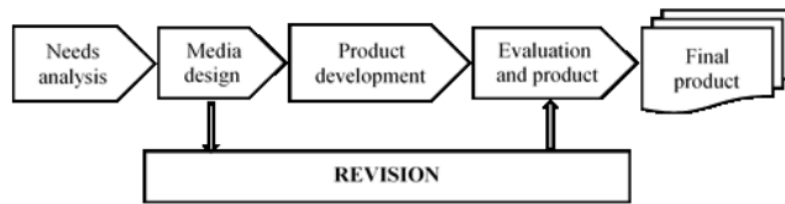
Figure 1. Model developed stage

- Needs analysis (*research and information collecting*) by needs assessment, literature review, small scale initial research, and considerations of values.
- Media Design (*planning*) is designing a research plan, which consists of things needed in the implementation of the study, research design, or research steps.
- Product development (*develop a preliminary form of product*) that is the development of learning media, learning process, and evaluation instrument.
- Evaluation and product trial (preliminary field testing) by testing the developed product to the trial subject and during the trial, observation, interview, and distribution of the questionnaire are carried out. Following this trial, revision is made based on the input from the trial.
- The final product (final product *revision*) is the revision based on the input from the field testing.

This study is carried out in SMK Negeri 1 Suwawa, Bone Bolango regency, Gorontalo. The evaluation and field-testing of the product is implemented in two stages, field-testing on media experts and material experts and evaluation and field testing on 25 students.

The instruments used in this study are (1) expert validity sheet to assess the motion graphic learning media, where the produced learning media was validated by four experts including two experts in Indonesian history materials, and two experts in learning media. The instruments for media experts focus on layout, audio, and easiness in operating the media. Meanwhile, media experts focus on display, audio, and easiness to operate the media. Also, the materials experts validate the quality of the learning and quality of the materials; (2) interview guideline is used to collect data on the interest and motivation of the learners on motion graphic learning media; (3) validity sheet on utilization of motion graphic learning media on learners' activity based on the display, audio, quality of the materials, and easiness to operate the media; and (4) learning achievement test.

The data analysis employed a descriptive quantitative analysis, comprising two stages. The first stage is to describe the designed motion graphic animation video as learning materials and describe the result of pretest, posttest, and validation of media appropriateness based on the feedback from experts (materials, media, and users). Validation analysis was carried out to calculate the average score from validators then convert them into criteria as presented in Table 1 (Arikunto & Cepi, 2009).

The next step was to assess the appropriateness of the motion graphic animation video as learning media through the score of each feedback and calculate the average score with the following formula (1).

$$\bar{x} = \frac{\sum x}{n}$$

(1)

Where:
    x= average score
    n= number of respondents
    ∑x= total score

The percentage is calculated using the following formula (2).

$$Result = \frac{total\ score}{maximum\ score} \times 100\%$$

(2)

The average score and the appropriateness percentage result are obtained; the criteria are presented in Table 1.

Table 1. The validity criteria

No.	Score in percent (%)	Category
1	< 21%	very inappropriate
2	21 – 40 %	not appropriate
3	41 – 60%	enough appropriate
4	61- 80%	appropriate
5	81 – 100%	very appropriate

RESULTS AND DISCUSSION

The development of motion graphics animation video as an alternative learning media in Indonesian history subject was initiated by the animation video. In general, the development of this product consists of:

- Designing the display of the learning media which consists of application design to display the motion graphics animation video and design of the motion graphics animation video. Figure 2 presents the design of the application to display animation.
- Product development, which consists of: (a) designing stage of the animation components which will be animated in motion graphic video by using adobe illustrator software, (b) animation stage by animating all the designed components into an animation video called motion graphic. In this stage, the still images can move dynamically by using adobe after effect software.
- Editing stage in the raw animated video by inserting the audio effects to support the video, then inserting opening vide from the animated motion graphic. This stage is carried out with *adobe premiere pro*.
- A simple video player application is designed to play the developed animation video to ease its operation process. This simple application is created using *Adobe Director 11.0.*
- Designing the profile page in a simple video player application. The design of the profile page is created using adobe illustrator.
- Designing the material page display, where buttons to direct to the materials page are located.
- Designing video page display where buttons to select the video display is located.
- Displaying the video button, when the video button on the video page is selected, each page of the selected video will be displayed.
- Designing the materials/topic entry page display, the materials that have been inserted in the designed application using the *Adobe Director 11.0.*
- Exit page display.

Figure 2. Design homepage

Information:
1. Title of learning media
2. Profile button
3. Material button
4. Exit button
5. Title bar
6. Video button
7. Media makers

A validity test of the media in this research consists of display aspect where indicators such as the extent of information clarity such as text, color, picture, and characters on the learning media. In each indicator, there is no score below 75%, as seen in Table 2.

Table 2. A validity test of the media

No	Aspect	The observed score	Expected score	Percent %
1	Display	45	50	90
2	Audio	9	10	90
3	Easiness to operate	12	15	80
	Total	66	75	88

This means that the clarity of the display, audio, and operation of the designed materials is easy to be operated with the total percentage of the display, audio, and easiness to operate the learning media was 88% and was within very appropriate criteria.

A validity test of the materials consists of the learning quality aspect and material quality aspect. On the learning quality aspect, indicators such as the ability to deliver the materials, the clarity of the simulation on motion graphics animation video learning media are being assessed. On the material quality aspect, indicators such as appropriateness of material selection and benefit of the materials being delivered are also being assessed. In each indicator, there was no score below 75%. The detail is presented in Table 3. This indicates that the quality of the learning and the quality of the materials obtained the total percentage of 89% and is within very appropriate criteria.

Table 3. A validity test of the materials

No.	Aspect	The observed score	Expected score	Percent %
1.	The learning quality	12	15	80
2.	Material quality	37	40	92.5
		49	55	89

Interview with the teachers and students show that motion graphic animation video as learning media is needed in learning Indonesian History subject. The interview with the students reveals that the designed motion graphic animation video in Indonesian history subjects can increase students' interest and motivation. This result echoes the result of the study by Purwanti and Haryanto (2015), and Gambari et al. (2014), which state that utilization of animation video-based learning media as alternative learning assistance can increase students' interest and learning achievement.

Further, Shabiralyani et al. (2015) show that the utilization of audiovisual media can increase students' learning activities and achievement where a portion of students' who attain the standard of achievement increase to 90.50%. The utilization of appropriate media will increase the effectiveness of the utilization of the media itself. Therefore, since students had been motivated to utilize the media, the utilization aspect should be taken into consideration by the teachers. This is because the developed media serves as potential assistance that can be utilized as alternative learning media within the class.

Validation test by users (students) consists of display, audio, material quality, and easiness to operate the learning media, which describe their enthusiasm or students' interest in the developed learning media. There are 22 indicators in this validation which are described into 10 items to measure the display aspect, 2 items to measure the audio aspect, 5 items to measure the material quality aspect, and 3 items to measure the easiness to operate the learning media. As seen in Table 4, students' assessment on display aspect was 88.4% and was within very appropriate criteria.

Table 4. Level of validation test by users (students)

No.	Aspect	Aspect of percentage (%)	Total of percentage (%)
1	Display	88.4	
2	Audio	89.2	
3	Material quality	86.4	87.9
4	Ease in operating	88	

This score implies that the students' level of interest toward the developed motion graphic animation video is considered high. The feedback on the audio aspect of the developed learning media scored 89.2% with very appropriate criteria. On the material quality aspect, the average score was 86.4%. Meanwhile, the average score of the ease in operating the media measures at 88%. Both of these criteria were within very appropriate criteria. These all prove that the developed motion graphic video animation learning media can be used to assist students in understanding Indonesian history subjects and makes students aware that Indonesian history is very interesting to be studied. Also, the designed media contains audio components to deliver information just like the verbal description in the class. This media also contains video, which displays motion and animation in describing the materials. Hence, the media impress students and draw their interests.

According to Pinter et al. (2012); Hwang et al. (2012); Riyana (2015); and Sutisna (2016) the implementation of animation media in learning can bring an impressive influence on learners' attention, interest, motivation, etc. Meanwhile, Islam et al. (2014) argue that the implementation of animation media can be utilized as an alternative to increasing learners' interest. Thus, learning can be more enjoyable and ease teachers in delivering the materials. Wiana (2018) insists that motion graphics animation video-based learning can be

concluded to have a positive influence on students, where students feel it is easier to understand the learning materials and makes them more confident and satisfied with their learning experience also insists on this. Therefore, it can be said that motion graphic animation video can is appropriate to be used in the Indonesian history learning process as it can increase the students' interest, motivation, participation, as well as increase their learning achievement. This study also proves that average differences in students' learning achievement following the utilization of this motion graphics animation video-based learning materials are (79.20) than before the utilization of this media (57.60) in learning.

CONCLUSIONS

Based on the findings and discussion above, we conclude that: (1) motion graphic animation videos as alternative learning media for Indonesian history subject developed are proven to be very appropriate by the experts (media and materials); hence, it is suitable to be utilized in the learning process; (2) the students provided positive responses to the utilization of motion graphic animation videos, and the implementation was regarded as very appropriate in which each learning syntax was carried out well or very well, seen from the average score of 87.9% on the field trial; and (3) the students' active participation during the learning process using this motion graphic animation videos media for Indonesian history subject was in the very good category. Also, the students' learning achievement was in good criteria, seen from the average score before using the media is 57.60 (pretest), while the average score after using the media is 79.20 (posttest).

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