The Development of Kinemaster Animation Video as a Media to Improve Science Literacy in Elementary Schools

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ABSTRACT

[The Development of Kinemaster Animation Video as a Media to Improve Science Literacy in Elementary Schools]. This research was conducted to develop kinemaster animation video media using the four D development model to improve students' scientific literacy on magnetism. The aim of this study was the *Kinemaster* animated video media that tried out to 27 six-grade students of SDN Bulusidokare Sidoarjo with *Control Group Pretest-Posttest Design*. Data collection techniques were validation, observation, tests, and questionnaire. The analysis of research result revealed that the feasibility included: 1) valid, the media and instructional tools that were developed by the researchers were feasible to be experimented; 2) practical, the feasibility of learning went very well with the percentage of 88% to 100%, *best practice* that was found were students' enthusiasm increased, the media could be played many times and able to motivate students in doing experiments. The obstacles that happened during the learning process were students' readiness, insubstantial facilities and infrastructure, and nonoptimal online learning supervision; 3) effective, the science-literacy-test result of experimental-class students passed with *N-gain* 0,5 to 1.0. Whereas, on the control-class, some students faced failure with *N-gain* from 0.17 to 0.57. Data from *N-gain* results (%) both classes got normal and homogenous distribution, thus *independent sample t-test* was conducted with significance result 0.00 < 0.05. It can be affirmed that there was effectivity difference in improving science literacy on experimental-class and control-class. Good responses that students gave reached 89% to 100%. The conclusion of this study is *Kinemaster* animated video media was feasible and effective to be used in improving science literacy on primary school students.

Keywords: *Learning Media, Kinemaster Animation Video, Science Literacy.*

INTRODUCTION

The result of the PISA study in 2018 revealed that science literacy in Indonesia scored 396 and ranked 70th place out of 78 countries, so that it was still far from the PISA's average standard (OECD, 2019). Due to PISA 2018 that stated students' literacy level in Indonesia was very low, the government tries to design programs that some of them are School Literacy Movement (SLM) and Minimum Competency Assessment (MCA). Those two programs have a tight correlation between improving students' science literacy skills in Indonesia. Through the School Literacy Movement (SLM) activity, the Ministry of Education and Culture have hopes for each school to develop literacy activities by making some reading spaces at school and expanding book or magazine collections that students can read. Besides School Literacy Movement (SLM), the government also develops Minimum Competency Assessment (MCA) to measure schools' potency; thus, they can evolve based on the situation around them. The implementation of this MCA requires some students from one school who are randomly selected to solve some questions that have different literacy levels. The results of MCA obtained are used by the government as references to map the education in Indonesia based on the students' situation and ability.

Science literacy, according to PISA, is the ability that is owned by someone in using knowledge of Science, identifying questions,

and drawing a conclusion based on the empirical evidence to comprehend and come to a decision that is related to nature and the changes that were done to nature through the activities that humans conduct. Science literacy is expected to make students choose appropriate information scientifically, understand figures, tables, charts on scientific information, and evaluate the truth or a fact from a scientific finding. Science literacy becomes compulsory and crucial for every level of society to support a nation's development through the quality of human resources with literacy in Science and Technology. However, the PISA's evaluation result states that students in Indonesia still have low literacy skills, which tend to be decreased every year.

The period of the COVID-19 pandemic makes teaching-learning activities in all education levels around the world become hampered. This situation also happens in Indonesia, where students study from home to maintain safety and protect the health of the nation's next generations. Learning with the online model (on the internet) has complained about a lot by students' parents, but the government policy has been regulated in the Circular Letter of Ministry of Education and Culture Number 3 the Year 2020 about COVID-19 precautions education units on March 9th 2020. Ministry of Education and Culture urges all education units under the Ministry of Education and Culture to defer conducting programs that invite many participants or change it with video conferences or other online communications. Particularly for regions that have been affected by COVID-19, online learning from home is applied and is viewed equally as school or university attendance.

Based on observation result in the field about learning in SDN Bulusidokare Sidoarjo, there are many teachers who only used student worksheet that was bought from a publisher to manage online learning. They gave assignments via *Whatsapp* group in the form of instruction to do exercise(s) on student worksheet at certain page. Moreover, the teachers also made individual video call(s) through *Whatsapp* with the students alternately. When the researchers interviewed the teachers, so many teachers in SDN Bulusidokare Sidoarjo complained. It was because not all students had smartphone and the internet data required is too large. Teachers' creativity in designing an online learning is definitely required. It is in accordance with what (Martin, 2020) did in his research that was doing two-way communication with students' parents to decide on convenient online learning for students in this COVID-19 pandemic period.

Teachers have to have the ability to develop online-based learning media to be able to train students' intelligence. Media comes from Latin language 'medium' that means companion or mediator. Media is a message companion or mediator from the sender to the receiver of the message. According to (Sadiman et al, 2014) media is any kind of things that are used to send a message that is useful to stimulate mind, attention, interest, and emotion to support a learning process. (Mustaji, 2013) said that media is a tool – which is concrete, in the form of messages or information. From those several opinions, it can be concluded that media is a physical instrument that is utilized to convey messages or information to students in order to achieve the expected learning objectives. The role of media in a learning process is essential to accomplish the desirable learning objectives. Bruner in (Heinich, 2002) revealed that learning begins directly or enactive, experiences in using iconic representation by using video recordings or pictures or representation experiences symbolically by interpreting varieties of symbols. Things that should be considered in selecting a learning media are supports for learning materials, accessible, operating skills, time allocation, and appropriateness for students' thinking level. One of media that is suitable to use for online learning is video media. It is revealed by (Hajhashemi et al, 2018) that the ustilization of online videos could influence students' multiple intelligence. Video is a learning media that is also active to improve the standards in a learning process as mentioned by (Kay et al, 2019) that video could increase students' learning experience since it directly engages students in social learning. Through flipped-classroom-based learning, students also gave responses in the form of videos hence learning could go actively. It was similar to a research conducted by (Beheshti et al, 2018) that showed that learning videos could facilitate problem-solving and creative thinking by giving students pictures along with audio to

communicate the topic correctly, and enabling students to acquire skills in research, and organization, and knowledge for problem-solving and cooperative work.

The purpose of this study is to produce appropriate video-based Science learning media to improve science literacy skills in primary schools. The specific purposes of this study are 1) to describe the validity of *Kinemaster* animated video-based Science learning media; 2) to describe the practicality of *Kinemaster* animated video-based Science learning media in improving sixth-grade primary school students' science literacy skills that can be examined from: a) the feasibility of learning process using *Kinemaster* animated video-based Science learning media on 'magnets' material; b) *best practice* of learning using *Kinemaster* animated video-based Science learning media with 'magnets' material; c) the obstacles of learning using *Kinemaster* animated video-based Science learning media on 'magnets' material; 3) the effectivity of *Kinemaster* animated video-based Science learning media in improving sixth-grade students' science literacy skills that can be identified from a) students' science literacy skills after being taught using *Kinemaster* animated video-based Science learning media, b) students' response towards *Kinemaster* animated video-based Science learning media. This study developed a product in the form of *Kinemaster* animated video learning media with 'magnets' material. This *Kinemaster* animated video is expected to be able to help students in developing their science literacy skills. The production of this *Kinemaster* animated video is based on Curriculum 2013 for sixth-grade students Theme 5.

This study developed learning video media by utilizing *the Kinemaster* application. It is one of the android-based application that can be downloaded in the Google Play Store. This application is used to edit videos that we are going to produce; thus, it becomes more attractive. According to (Handoko, 2021), sophisticated features of this *Kinemaster* application can help users edit videos with better results. Hence, this application is quite liked by android users. It is the same with (Burum and Quinn's, 2015) opinion, mentioning that *Kinemaster Pro* from Nextstreamingcorp is a video editing application that is very favoured.

EXPERIMENTAL METHODS

The type of research used was Research and Development (R & D), a research method used to examine products' effectiveness and as a developer of certain products (Sugiyono, 2010). This study developed *Kinemaster* animated video learning media in which contains 'magnets' material and was designed based on instructional tools in the form of the lesson plan, 'magnets' teaching material, student worksheet, and instruments of science literacy skill. The subject of this study was *Kinemaster* animated video-based Science learning media in developing science literacy that was going to be trialled on 20 sixth-grade students of SDN Bulusidokare Sidoarjo Academic Year 2020/2021. The procedure of this study was conducted in two stages: the stage of learning media development and the stage of trialling the learning media in a virtual class. This study was conducted in three meetings that contained discussions of the properties of magnets, types of magnets and their function, how to make magnets, and things that can remove magnetism. The stage of learning media development referred to the 4-D (Four D) development model, which consists of four steps, such as to *define* (deciding), *design* (planning), *develop* (creating), and *disseminate* (distributing). The scheme of the 4D model (Thiagarajan et al., 1974) is shown in figure below:

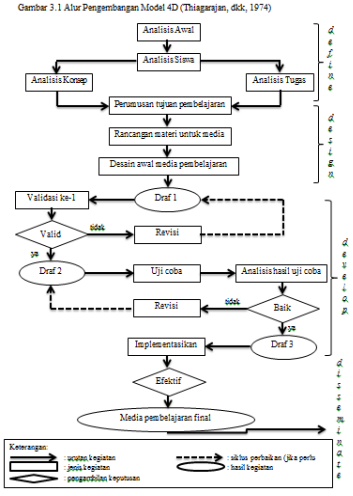

Figure 1. 4D Development Scheme

In the *define* stage, the researcher decided the conditions required in the video learning media production plan by analyzing the

objectives and limitations of the learning material. This step involved preliminary analysis, students, learning material, concept, and planning learning objectives. In *the design* stage, the researchers formulated test questions and designed the *Kinemaster* animated video media that would be used in the learning process. In *the developing* stage, the researchers produced *Kinemaster* animated video media in improving students' science literacy that had been revised according to critics and advice from experts (validators) and data from *Kinemaster* video media trial result. In the last stage *disseminate*, the researchers did scientific publication through the journal and distributed the production of *Kinemaster* animated video to their peers at school. In addition, this *Kinemaster* animated video was also uploaded on Youtube to become different learning media for other teachers. The trials of this *Kinemaster* animated video used a One Group Pretest-Posttest research design. The research instruments of this study consisted of a media validation sheet, learning feasibility sheet, *best practice* observation sheet, obstacle observation sheet, science literacy tests, and student response questionnaire. Data analysis technique that was used to measure the validity was by using reliability test, learning feasibility using the percentage of learning criteria that was proposed by (Riduwan, 2012). *Best practice* and obstacles used descriptive qualitative analysis, students' science literacy improvement used *N-gain* score (Hake, 1999). Normality test, homogeneity test, t-test, and students' response used student-response-criteria that was proposed by (Riduwan, 2012).

RESULTS AND DISCUSSION

The quality of this *Kinemaster* animated video development had passed three criteria, those were valid, practical, and effective. Development criteria, according to (Nieveen, 2007), have three aspects in conducting education product development that refer to the quality that is viewed based on the validity, the practicality, and the effectivity. Science learning media that was developed was also equipped with lesson plan, student worksheet, and science literacy test instrument. The presence of media in learning can support students' concept mastery and give stimulations to students to achieve the learning objectives. It is in accordance with Behaviorism learning theory that was proposed by Thorndike that stated learning is a process that is related to responses and stimulus. The development of *Kinemaster* animated video that is used in online learning can give stimuli towards learning materials and make students become enthusiast in responding to all learning activities well.

The validity of this *Kinemaster* animated video-based Science learning media was validated by three validators. The validation result of *Kinemaster*-animated-video that was performed by the three validators showed that the mode of learning media validation components was in the form of media format, media display, concept presentation, and the implementation of science literacy that was contained in that media was 3,0 to 4,0 and was classified as *very valid* by the validators for 12 indicators and 10 indicators got *valid* category. The evaluation of learning media validation that obtained mode between 3,0 to 4,0, when linked with media validation scoring criteria by (Ratumanan and Laurens, 2011), showed that *Kinemaster* animated video that was developed by the researchers belonged to *valid* category with an annotation that it could be used with some revisions. The reliability of *Kinemaster* animated video-based Science learning media validation result was 86% to 100%. The revision that was done by the researchers was by adding clips about information of Science that could enrich students' knowledge in learning magnets, thus students could do science literacy by recognizing science issues in daily life, and solve science-related problems in daily life. It is also mentioned by Poedjiadi in (Toharudin et al, 2011) who said that a person can be said to have science-and-technology literacy skills if that person has the ability to solve problem by associating concepts of Science that are obtained from education, recognize a product of technology and know about its influence for the surroundings, and become creative in developing products of technology thus students can make a decision by considering local's values and culture. Related to that matter, (Sadiman et al, 2014) also conveys that learning media selection should be based on learning material, learning objectives, students' character, surrounding environment situation, and

limitations of the media itself. (Suryanti et al, 2020) also reveled that local culture-based learning materials are more effective in training primary school students' literacy skills up to level 5.

The validation result of the lesson plan that was developed from the three validators got mode result 3,0 to 4,0 with validation categories that were obtained were *very valid* for 11 indicators, and *valid* for 6 indicators. The reliability of validation result was 86% to 100%. The validation result showed that the lesson plan was appropriate to be used in teaching learning process according to (Ratumanan and Laurens, 2011) that validation result scores 2,6 to 3,5 is considered *valid*, and score 3,6 to 4,0 is considered *very valid*. validation result of the lesson plan was developed based on Minister of Education and Culture's Policy number 22 Year 2016 about the components that are included in lesson plan, those are: school's identity. Subject's identity, class/semester, main material, time allocation that is used to accomplish basic competences, learning objectives that are suitable for the basic competences, basic competences, indicators, learning material, learning method, learning media, learning resources, learning steps, and learning assessment. The validation result of student worksheet that had been developed by the researchers got mode score 3,0 to 4,0 with validation category *very valid* for 6 indicators, and *valid* for 2 indicators. The reliability of validation result was 86% to 100%. This validation result can be associated with scoring criteria that was proposed by (Ratumanan and Laurens, 2011) that shows that student worksheet that was developed by the researchers was classified as *valid* with an annotation that it could be used with some revisions.

The validation result of the content of science literacy test that had been developed got mode score 3,0 to 4,0 that was categorized as *very valid* for the 10 test items. It means that all the questions were very valid. while the validity of science literacy res construction that had been developed got mode score 3,0 to 4,0 with validation category *valid* for 9 test items and *very valid* for 1 test item. Based on the data, when related to scoring criteria that was proposed by (Ratumanan and Laurens, 2011), science literacy test that was developed by the researchers was categorized as *valid* with an annotation that it could be used with some revisions. Revisions related to science literacy test instrument was conducted according to the three validators' advices, such as adding question categories besides *remembering*, which means that there should be some questions that belong to C3 or C4 level thus the level of students' science literacy skills can be improved. Questions that were formulated by the researchers had figures and texts that could be analyzed by students to develop their science literacy skills. from the instruments that had been validated above, it can be concluded that the instructional tools that were developed by the researchers were appropriate to be trialed in the field.

The practicality of this *Kinemaster* animated video was viewed from learning feasibility, *best practice*, and the obstacles in the learning process. Learning feasibility by using *Kinemaster*-based video media got average score 3,3 to 4,0 with feasibility percentage of 83% to 100%. Based on lesson plan's observation result, (Riduwan, 2012) stated that feasibility percentage of lesson plan ranged between 75% to 100% could be categorized as *well executed*. The learning process went very well because it was conducted based on the steps that was written in the lesson plan that had been made. In the learning process, the teacher showed the *Kinemaster* animated video through Youtube platform. Students could access the video via online anytime and anywhere, students could also replay the video thus the material that was discussed could be comprehended better. It was also supported by (Atika, et at al, 2018) who said that learning process with the help of video gives learning experience to be directly involved and connects the prior knowledge with the information that is going to be learned thus it becomes meaningful and systematically develops thinking skills. The presence of media in the form of learning video that plays a role in demonstrating some concepts helps to stimulate students' curiosity towards the material that is going to be learned and grows students' interest to participate actively in the learning. Besides, (Hajhashemi et al, 2018) also discovered a fact in their research that students had higher intrapersonal intelligence by utilizing online videos as learning resource. Concisely, the

learning feasibility result can be read thoroughly through the bar chart below:

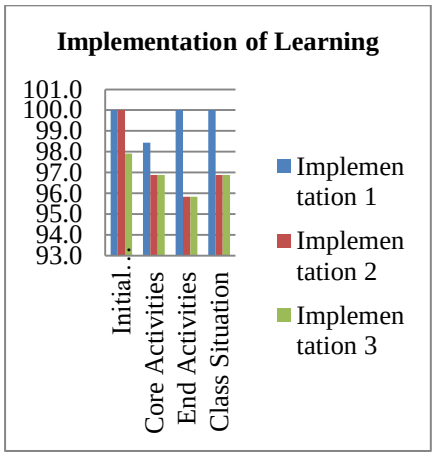

Figure 2. Bar Chart of Learning Feasibility

On the bar chart above, it can be seen that the main activity got lower score than the pre-activity or post-activity. It is because there was difference in activities that was achieved on every meeting. In addition, there were some obstacles that happened such as smartphones that was being carried by working parents or inadequate internet connection at students' location, so that not all students followed the activities as scheduled. Students' enthusiasm was more visible in the pre-activity since they were motivated to participate in the quiz or game conducted by the teacher at the beginning of the class. Moreover, student also seemed excited in doing question-and-answer with the teacher in the apperception session. *Best practice* that found in the process of learning: firstly, learning using Kinemaster animated video could attract students' interest to watch the video and read every part of the video. Students' enthusiasm can be seen on the figure below:

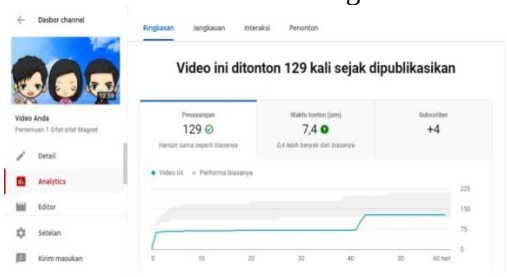

Figure 3. *Kinemaster* Animated Video Views

It can be seen on the figure above, the first meeting of learning using *Kinemaster* animated video through Youtube showed that there were 129 views since the video was released with 7,4 hours of view duration. Therefore, it can be concluded that students' enthusiasm in learning by using *Kinemaster* animated video was quite high. It was also supported by (Kay, et al, 2019) in their study that revealed that learning through online video-based discussion was very interesting since it involved students to give feedback in the form of video that will later be commented but their peers, thus the teacher-student-interaction and student-student-interaction could happen. Secondly, students could easily replay the video to do the student worksheet that was provided in the description column, so that students could observe and analyze the material that was presented in the video well. It was in accordance with the study that was conducted by (Imamah, 2012) who – in her study, explained that the learning that was combined with animated video had been increasing, particularly regarding students' involvement in the learning process and the time students used to find, investigate, and discuss the problem that was delivered by the researcher. Thirdly, students were also motivated and were able to easily find clues to conduct an experiment or observation towards the materials presented. Science-related information could also enrich students' knowledge towards the material development that was related to 'magnets', thus students had better understandings about things related to magnets. This supported the study that was conducted by (Zuraidah, et al, 2016) that showed that using videos of online lecture and doing tutorials could be used to accomplish higher learning achievement.

There were some obstacles that were found during the learning process by using this *Kinemaster* animated video media. Learning process was conducted three times that discussed the properties of magnets, types of magnets and its function in daily life, how to make magnets and demagnetization. The obstacles that were found were: Firstly, students' readiness in following the learning activities at different times since there were some students who used their parents' smartphone, so that they had to wait for their parents to be home to do the science literacy test and/or student worksheet. Secondly, students who were out of town could

not really attend the activities that were on the student worksheet well. It was because of limited facilitation and infrastructure when the students were out of town. Therefore, the student worksheet was filled out after the class ended. Thirdly, the researchers could not directly supervise the process of student worksheet fulfillment and/or literacy test since the learning process was conducted via online. This phenomenon supported the study that was conducted by (Anugrahana, 2020) that showed that there were obstacles that were found during online learning , those were the situation of parents who frequently used WhatsApp application so that they did not really know the advantages of other applications, difficulties in getting internet connection since the gadgets were frequently carried by the parents to work, and difficulties in getting signals since the provider that was being used was insufficient.

The effectivity of *Kinemaster* animated video in improving science literacy was viewed from two factors, those were the improvement of students' literacy skills through pretest and posttest with *N-gain* score, normality test, homogeneity test, t-test, and students' response towards *Kinemaster* animated video media. The results of pretest, posttest, and *N-gain* on the field trial can be seen on the table below:

Table 1. The Science Literacy Test Results of Experimental class and Control-Class Students

No	Experiment				Control			
	Pretest	***Posttest***	***N-Gain***	**Category**	***Pretest***	***Posttest***	***N-Gain***	**Category**
1	40	90	0.83	High	40	60	0.33	Medium
2	50	80	0.60	Medium	40	60	0.33	Medium
3	40	90	0.83	High	30	60	0.43	Medium
4	80	100	1.00	High	50	70	0.40	Medium
5	30	90	0.86	High	50	60	0.20	Low
6	50	80	0.60	Medium	30	50	0.29	Low
7	60	90	0.75	High	50	60	0.20	Low
8	40	80	0.67	Medium	30	70	0.57	Medium
9	30	80	0.71	High	40	60	0.33	Medium
10	30	90	0.86	High	30	60	0.43	Medium
11	40	80	0.67	Medium	50	60	0.20	Low
12	50	90	0.80	High	40	70	0.50	Medium
13	60	80	0.50	Medium	70	80	0.33	Medium
14	80	100	1.00	High	60	80	0.50	Medium
15	40	80	0.67	Medium	40	60	0.33	Medium
16	40	90	0.83	High	50	70	0.40	Medium
17	50	90	0.80	High	40	60	0.33	Medium
18	60	90	0.75	High	60	80	0.50	Medium
19	70	90	0.67	Medium	80	90	0.50	Medium
20	50	80	0.60	Medium	40	60	0.33	Medium
21	40	90	0.83	High	50	60	0.20	Low
22	50	80	0.60	Medium	50	70	0.40	Medium
23	40	90	0.83	High	30	60	0.43	Medium
24	30	80	0.71	High	40	50	0.17	Low
25	30	90	0.86	High	50	80	0.60	Medium
26	40	80	0.67	Medium	40	60	0.33	Medium
27	40	80	0.67	Medium	20	50	0.38	Medium

Based on the table above, it was shown that Experimental class students scored between 30 to 80 on the pretest. Three students who got *passed* category on the pretest could be classified as students who had high literacy skills or it can be called as *literate*. Based on Cognitive theory proposed by (Piaget, 1964), the stage of cognitive development on primary school

students is classified into *concrete operational stage* that is from 7 to 10 years old. In this stage, children are classified to be able to sort numbers, identify, considering problem-solving, understanding their surroundings, and able to create a work. While on the posttest, Experimental class students scored between 80 to 100, with 27 students got *passed* category. it means that the students got 100% of mastery after conducting learning process by using *Kinemaster* animated video media. It was different form Control class that did not use *Kinemaster* animated video media, students' pretest scored between 20 to 80 with mastery criteria of 2 students. While on the posttest, Control class scored between 50 50 90 with 10 students who passed the test and the other 17 students were classified as failed. The mastery percentage was only 37% since the learning process went like usual and did not use media that could improve students' literacy skills. The growth of students' literacy skills by using *N-gain* calculation on Experimental class resulted 0,5 to 1,0; with (Hake, 1999) *N-gain* classification, there were 16 students who got *high* gain classification, while the other 11 students got *moderate* gain classification. The result of this literacy test supported study by (Niswatuzzahro et al, 2018) that conveyed that the implementation of discovery learning model with the help of audio-visual media could increase students' science literacy. In addition, a study conducted by (Norma et al, 2020) that revealed that the use of learning multimedia had more influence on students' first science literacy competence, that was explaining a phenomenon scientifically. Normality test of the pretest and post test results on Experimental class got significance score 0,215 > 0,05. Therefore, it can be said that the data was distributed normally. Whereas significance score that was obtained on Control class was 0,2,2 > 0,05; which means that the data was also distributed normally. Homogeneity test on both classes that was obtained from *mean-based N-gain* (%) resulted 0,571 > 0,05. It can be concluded that the *N-gain* data variants (%) for the data od Control and Experimental class were similar or homogeneous.

On the stage of t-test, *group statistics* data was obtained. The mean of *N-gain* (%) on Experimental class was 74,6914, which means that *Kinemaster* animated video that was used in the learning process was effective enough in growing students' science literacy skills, while on Control class, mean score that was obtained was 36,8563 < 40 which means that learning process without using *Kinemaster* animated video media was not effective in growing students' science literacy skills. Furthermore, on the two-tailed t-test, significance score of 0,000 < 0,05 was earned thus it can be concluded that there was significant difference in effectivity between learning process that used *Kinemaster* animated video media and the learning process that did not to improve the science literacy skills of sixth-grade students of SDN Bulusidokare Sidoarjo. It was also approved by (Anita et al, 2019) who stated that the difference in learning achievement of university students in Experimental class who were taught using animated video was far higher than those who were in Control class who were taught using conventional method. Moreover, (Norma et al, 2020) also mentioned that the utilization of multimedia in learning influenced the science literacy of middle school students in Mataram city because the growth of science literacy on the students in Experimental class was higher than the growth of science literacy on the students in Control class. Based on the matters above, it can be concluded that *Kinemaster* animated video media was effective in improving students' science literation.

Students' response was collected from the questionnaire that was administered to 20 students by using Google Form after the students attended learning process using *Kinemaster* animated video media on 'magnets' material. The result of students' response from 12 statements that was written in the questionnaire got "Yes" response between 89% to 100%, and got "No" response between 4% to 11%. From the data, it can be concluded that students' enthusiasm in attending online learning by using online-based *Kinemaster* animated video media was very high and was able to improve their science literacy skills. this phenomenon

supported a research that was conducted by (Adhiesta et al, 2016) which affirmed that Flash-based Science learning multimedia was valid, practical, and effective to be used to train students' science literacy skills. Furthermore, (Atika et al, 2018) showed that the help of learning video media that played a role in demonstrating some concepts helped to stimulate students' interest in Chemistry material that was going to be discussed and to participate actively in the discussion.

CONCLUSION

The result of the study on learning with online-based *Kinemaster* animated video media that had been developed by the researchers are considered feasible in terms of validity, practicality, and effectiveness. The validity aspect includes learning media validation and its instructional tools. The practical aspect of learning includes the feasibility of lesson plan, best practices, and obstacles found during the learning process. In terms of effectiveness in learning that can be viewed from students' science literacy test and students 'response in improving primary school students' science literacy skills.

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