

DEVELOPMENT OF ANIMATED VIDEOS BASED ON CANVA FOR LEARNING MATHEMATICS TO IMPROVE CLASS STUDENT LEARNING OUTCOMES III AT SD NEGERI 056002 LORONG IBADAH

RISKYKA¹

¹STKIP AL Maksum Langkat, Indonesia

ABSTRACT

This research aims to develop canva based animated videos. This research is research and development (R&D). This research uses the ADDIE development model. The ADDIE development model consists of analyze, design, develop, implement and evaluate. The research was carried out by SD Negeri 056002 Lorong Ibadah. The research subjects were 25 class III students consisting of 16 male students and 9 female students. The research object is canva based animated video. The collection techniques used are observation, tests and questionnaires. The data analysis techniques used in this research are: (1) feasibility analysis of canva based animated videos); and (2) analysis of the effectiveness of canva based animated videos. Based on the validation results carried out by material experts, 89.75% was in the very feasible category, while the media expert validation results were 93.50% in the very feasible category. Results of trials carried out using canva based animated videos on class III students It is known that as many as 22 students were said to have completed the trial, and 3 students were said to have not completed the trial. This is proven by the percentage result of 92%, which is in the very effective category. Based on the description above, it can be concluded that canva based animated videos are said to be very feasible and very effective for use in the classroom III at SD Negeri 056002 Lorong Ibadah.

Keyword: animated videos, canva, mathematics learning, learning outcomes

Corresponding Author:

Riskyka
STKIP Al Maksum Langkat, Indonesia
Email : yriskyka@gmail.com



1. INTRODUCTION

Nowadays technological developments have become increasingly advanced. This also has an impact on the education sector. Every teacher is required to be able to create learning media, to support the process of teaching and learning activities. The use of media in learning not only helps students understand learning material. The use of media also makes students happier and more enthusiastic (Lubis & Rambe, 2021). This is in line with Rambe et al (2023) who said that a pleasant atmosphere during learning will make students more enthusiastic about participating in learning in the classroom. Based on observations made by researchers on class III teachers in SD Negeri 056002 Lorong Ibadah it is known that students are less interested in learning mathematics, teachers have not been able to create learning media that makes students interested in learning, student learning outcomes in mathematics learning are also low. Seeing problems like this, researchers will provide a solution, the solution that will be provided is by developing canva based animated videos which are expected to improve student learning outcomes. According to Aminah (2019), animated videos are shows that children really like. According to Apriansyah (2020), animated videos are a combination of audio media and visual media in presenting objects in detail so that difficult lessons can be understood. By

using animated videos in the learning process, students will understand the learning material more quickly. This is supported by research Nurfuati & Amelia (2020) say that with animated videos children will understand more easily so that children will more quickly apply what they see in life. According to Ahmadi et al (2018), animated videos as a learning medium have advantages and disadvantages. The advantages of animated video media are (a) animated videos can convey a complete learning message, (b) they can attract students' interest in learning, (c) they can last for a long time, (d) animated videos offer simple, non-monotonous learning and more fun, (e) Facilitates the process of absorbing learning concepts, and (f) Animated videos can be played back. Meanwhile, the disadvantages of animated videos as learning media are (a) they require creativity and skills in designing animated videos, (b) the material is difficult to change if an error occurs, (c) they require quite a lot of money, (d) they can only be used via gadgets, computers, etc. tablets and ipads,

Researchers will develop canva based animated videos. Canva is an application that provides an easy alternative in designing (Rahmatullah et al., 2020). Canva really makes it easier for teachers to design learning media, as (Triningsih, 2021) said that canva makes it easier for teachers and students to carry out learning processes based on technology, skills, creativity, along with other benefits, this is because the design results using canva are able to increase students' interest. in learning activities and increasing student motivation by presenting teaching materials and materials in an interesting way.

According to Putri et al (2022), the advantages and disadvantages of canva are as follows: Excess: (a) Has a variety of graphic designs, animations, templates and interesting sheets, (b) Able to adjust time in designing effective learning media, (c) Designing learning media can be done at any time, and can be done using a cellphone or laptop, (d) This application is easy to achieve by educators and students, (e) Using the Canva application creates a creative and innovative educator. Lack, (f) The Canva application relies on a sufficient and stable internet network, (f) Several new features can be obtained with a premium account, (g) Video designs tend to take a long time to download, (h) There is no table insert feature to launch presentation slides When using Canva there are steps in how to use it. According to Agamani et al (2021) they say that the steps for using the application are as follows:

- a. Sign up to Canva by logging in at <https://www.canva.com> there are some how to sign up on canva using facebook, gmail or register by filling in personal data to create a canva account.
- b. Select Requirements. Canva provides various options such as presentations, videos, Instagram posts, etc. In this service, users are directed to select presentation to create presentations of teaching materials.
- c. Select blank sheet (template). Here there is a blank worksheet which is the design area. This sheet allows the user to design the template according to his wishes. Another option available is the various templates that are already available, making it easier for users to choose the appropriate template.
- d. Use canva's features. Canva has many features that make it easier for users to design, in this case creating teaching materials.
- e. Save results. Canva also has an auto save function, so users don't need to worry if they forget to save the design they have worked on. Apart from that there are also Share, Download and Show functions.

The use of canva based animated videos can be used in mathematics learning. Mathematics learning is a process of interaction between learning components to develop students' thinking abilities in problem solving (Gusteti & Neviyarni, 2022). Mathematics learning in schools aims to ensure that students have good reasoning power in solving problems in mathematics learning (Marfu'ah et al., 2022). By using canva based animated videos in mathematics learning, it is hoped that it can improve student learning outcomes. Based on the background above, researchers are interested in developing canva based animated videos for mathematics learning to improve the learning outcomes of class III students in SD Negeri 056002 Lorong Ibadah.

2. RESEARCH METHOD

This research is research and development (R&D). This research uses the ADDIE development model. The ADDIE development model consists of analyze, design, develop, implement, and evaluate (Yusuf et al., 2023). The research was carried out by SD Negeri 056002 Lorong Ibadah. The research subjects were 25 class III students consisting of 16 male students and 9 female students. The research object is canva based animated video. The collection techniques used are observation, tests and questionnaires.

The data analysis techniques used in this research are: (1) feasibility analysis of canva based animated videos); and (2) analysis of the effectiveness of canva based animated videos.

Table 1. Likert Scale Criteria

No	Answer	Score
1	Very Worth It	4
2	Worthy	3
3	Worthy	2
4	Not feasible	1

(Kesumawati et al., 2022)

No	Eligibility Percentage	Category
1	0 % - 20%	Not feasible
2	21 % - 40%	Not Worth It
3	41 % - 60%	Decent Enough
4	61 % - 80%	Worthy
5	81 % - 100%	Very Worth It

(Parinduri et al, 2022)

To calculate canva based animated video validation results, you can use the formula below:

$$\text{Wow} = \frac{TSe}{TSh} \times 100\%$$

(Lubis et al., 2023)

Information:

Vah = expert validation

This = total empirical score achieved

TSh = expected score

To calculate the completeness of learning outcomes, you can use the following formula:

$$P = x 100\% \frac{Pa}{Pb}$$

(Fadilla et al., 2022)

Information:

P: Percentage of student completion

Pa: Number of students who completed

Pb: Total number of students

Table 3. Criteria For Assessing The Effectiveness Of Canva Based Animated Videos

Score Interval	Criteria
81% - 100%	Very effective
61% - 80%	Effective
41% - 60%	Effective enough
21% - 40%	Less effective
0% - 20%	Ineffective

(Hidayat & Yakop., 2019)

3. RESULTS AND DISCUSSION

This research produces a product, namely a canva based animated video on mathematics learning with the aim of improving the learning outcomes of class III students in SD Negeri 056002 Lorong Ibadah. The stages in this research are as follows:

Analyze

At the analysis stage, researchers carried out several stages, including needs analysis, curriculum analysis, and student characteristics analysis. The results of the analysis carried out by researchers are as follows:

- a. Needs Analysis Based on the results of interviews conducted by researchers with class III teachers at SD Negeri 056002 Lorong Ibadah it is known that the teacher has not used learning media that can make students interested in participating in mathematics learning. So students feel bored quickly when listening to the teacher's explanation of mathematics learning material. This can have an impact on low student learning outcomes.
- b. Curriculum Analysis The curriculum analysis stage was carried out to determine the learning objectives and scope of material that will be used as a reference in developing canva based animated videos that are in accordance with the independent curriculum.
- c. Analysis of Student Characteristics This stage was carried out with the aim of knowing the characteristics of class III students in SD Negeri 056002 Lorong Ibadah. Based on the results of interviews conducted by teachers, it is known that students must be connected to real examples, not abstract ones. Researchers also

Design

After completing the analysis, the researcher also found out about the problems that occurred in class III students at SD Negeri 056002 Lorong Ibadah, the researcher will provide a solution, namely by developing a canva based animated video. At this stage the researcher will design a canva based animated video in accordance with the independent curriculum.

Develop

At this stage, the researcher has finished designing a canva based animated video. Then, the canva based animated video will be validated by material experts and media experts, whose aim is to find out whether or not the canva based animated video is appropriate to use. The validation results carried out by material experts and media experts can be seen in the table below:

Table 4. Expert validation results

Expert validation	Percentage	Category
Material expert	89.75%	Very Worth It
Media expert	93.50%	Very Worth It
Average	91.62%	Very Worth It

Based on the validation results that have been carried out, it is known that the validation results carried out by material experts are 89.75%, including the very feasible category. This is supported by research by Nurudin (2023) who said that the results of the material expert's assessment showed that the material expert gave an assessment with a total score of 49 with a percentage of 98%, including very feasible criteria. Novianti & Lubis (2023) said that the material validation results were 97% and were in the very feasible category. Meanwhile, the validation results from media experts were 93.50%, including the very feasible category. This is supported by research by Lubis et al (2023) which states that the results of media experts with a percentage of 90.25% are categorized as very feasible. Mustika et al (2023) said that the media validation results were 89.7%, including the very feasible category. From the results of the description above, it can be concluded that canva based animated videos are very suitable for use for class III students in SD Negeri 056002 Lorong Ibadah.

Implementation

This stage is an advanced stage of the development stage contained in the ADDIE development model. The product developed is a canva based animated video which has been validated by material experts and media experts. After being validated by material experts and media experts, and it was said to be very feasible, a trial was then carried out on class III students at SD Negeri 056002 Lorong Ibadah. The results of the tests carried out can be seen in the table below:

Table 5. Effectiveness Results of Using Canva Based Animation Videos

No	The number of students	Completion interval	Criteria
1	22	> 75	Complete
2	3	< 75	Not Completed
Percentage		92%	Very effective

Based on the results of trials that have been carried out using Canva-based animated videos on class III students at SD Negeri 056002 Lorong Ibadah, it is known that as many as 22 students were said to have completed the trial, and 3 students were said to have not completed the trial. This is proven by the percentage result of 92%, which is in the very effective category. This is supported by research by Riskyka et al (2023) which states that the test results were an average of 79.28 with a percentage of 80.% including the effective category.

Evaluation

This stage is the final stage in the ADDIE development model. The evaluation stage is used to correct any errors that occurred in each previous stage. The results at the evaluation stage were obtained from suggestions and input provided by material experts and media experts in order to improve the product being developed, namely canva based animated videos.

4. CONCLUSION

Based on the results and discussions that have been carried out regarding the development of canva based animated videos, it is known that: (a) the validation results carried out by material experts were 89.75%, including the very feasible category, while the media expert validation results were 93.50%, including the very feasible category. , (b) results of trials carried out using canva based animated videos on class III studentsIt is known that as many as 22 students were said to have completed the trial, and 3 students were said to have not completed the trial. This is proven by the percentage result of 92%, which is in the very effective category. Based on the description above, it can be concluded that canva based animated videos are said to be very feasible and very effective for use in the classroom III at SD Negeri 056002 Lorong Ibadah.

REFERENCES

- Ahmadi, F., Ibda, H., & Wijayanti, DM (2018). *School Media Literacy: Theory and Practice*. Semarang: CV. Pillars of the Archipelago.
- Aminah, Siti. (2019). *Development of animated videos as learning media to increase vocabulary in children aged 4-5 years*. Thesis. Faculty of Tarbiyah and Teacher Training. Raden Intan Lampung State Islamic University.
- Apriansyah, MR (2020). *Development of Animation-Based Video Learning Media for Building Materials Science Courses in the Building Engineering Education Study Program*, Faculty of Engineering, Jakarta State University. Pencil.<https://doi.org/10.21009/jpensil.v9i1.12905>
- Fadilla, WN, Misdalina, M., & Nurhasana, PD (2022). *Development of Hand Puppet Learning Media in Class IV Elementary School Fairy Tale Material*.*Journal of Education and Counseling (JPDK)*,4(4), 1813-1818.

- Gusteti, M.U., & Neviyarni, N. (2022). Differentiated learning in mathematics learning in the independent curriculum. *Lebesgue Journal: Scientific Journal of Mathematics, Mathematics and Statistics Education*, 3(3), 636-646.
- Hidayat, MT, & Yakob, M. (2019). Development of Aceh Folklore Teaching Materials Based on Local Wisdom to Shape the Character of Middle School Students in Langsa City. *Metamorphosis Journal*, 7(2), 189-200.
- Lubis, RR, Dwiningrum, SIA, & Zubaidah, E. (2023). Development Powtoon Animation Video in Indonesian Language Learning to Improve Student Learning Outcomes Elementary Schools. *Journal of Computer Science, Information Technology and Telecommunication Engineering*, 4(2).
- Lubis, RR, Rambe, N., Azhar, PC, Sugma, AR, & Franklin, TND (2023). Development of Digital Based Smart Card Learning Media to Improve the Learning Outcomes of Madrasah Ibtidaiyah Students. *MUDARRISA: Journal of Islamic Education Studies*, 15(1), 1-24.
- Lubis, RR, & Yusnita, NC (2023). Development of Media Puzzle Using Game Based Learning Approach to Improve Learning Outcomes of Mathematics Students in Elementary School. *Journal of Elementary School Education*, 188-194.
- Lubis, RR, Novianty, Y., & Amelia, D. (2023). Training on the Use of Flipbook-Based Learning Media for Teachers at SD IT Nusa Indah. *Journal of Community Service*, 4(1), 85-89.
- Lubis, RR, & Rambe, N. (2021). Training on Creating Interactive Multimedia Based Learning Media for PAB 10 Sampali Private Elementary School Teachers. *Journal of Community Service*, 2(2), 86-94.
- Kesumawati, D., Habib, M., Lubis, RR, & Novianti, Y. (2022). Development of Digital Based Flash Card Media on Thematic Learning in Ibtidaiyah Madrasah. *Pedagogical Journal of Islamic Elementary School*, 5(1), 83-94.
- Marfu'ah, S., Zaenuri, Z., Masrukan, M., & Walid, W. (2022, February). Mathematics Learning Model to Improve Students' Mathematical Reasoning Ability. In *PRISMA, Proceedings of the National Mathematics Seminar* (Vol. 5, pp. 50-54).
- Mustikah, S., Oktavia, M., & Ayurachmawati, P. (2023). Development of Card Match Circle Learning Media in Class V Elementary School Science. *Pendas: Scientific Journal of Basic Education*, 8(1), 6359-6367.
- Novianti, Y., & Lubis, RR (2023). Development of Audiovisual Based E-Modules in Increasing the Learning Independence of Elementary School Students in Stabat District. *Genta Mulia Journal*, 14(1).
- Nurudin, N. (2023). Development of Domino Card Media Using an Active Learning Approach to Improve the Numeracy Literacy Skills of Class VI Elementary School Students. *Semarang Regency Research Information Media*, 5(1), 364-376.
- Parinduri, WM, Lubis, RR, Rambe, TR, & Rambe, N. Development of Flipbook Based Smart Card Learning Media in Science Learning to Improve Student Learning Motivation Class III Elementary School. *School Education Journal PGSD FIP Unimed*, 12(3).
- Prasiska, DJ, Lubis, RR, & Rafli, MF (2020). Development of Smart Card Learning Innovations on Learning Interests of Class III Students at State Elementary School 057204 Stungkit Village. *Student Scientific Journal*, 1(1), 88-98.
- Putri, A., Arrasuli, BA, & Adelia, RP (2022). Canva Based Audio Visual Learning Media. In *National Seminar on Educational Sciences and Multi-Disciplines* (Vol. 5, No. 01).
- Rahma Nurfuati, ZA (2020). Development of an Interactive Video Model in Developing Toilet Training Skills in Children Aged 4-5 Years. *Journal of Early Childhood Islamic Education*, 4(2), 131-147. <http://jurnal.radenfatah.ac.id/index.php/raudhatulathfal/article/view/5473>
- Officialni, S., Satriani, I., & Rafi, M. (2021). Training on using the Canva application as a medium for making teaching materials in learning English. *Abdimas Siliwangi*, 4(2), 335-343.
- Triningsih, she's erna. (2021). Application of the Canva Application to Improve the Ability to Present Critical Response Texts Through Project Based Learning. *PaperKnowledge. Toward a Media History of Documents*, 15(1), 128-144. <https://doi.org/10.30957/cendekia.v15i1.667>.
- Yusuf, MA, Saidah, K., & Wenda, DDN (2023). Development of Monopoly Pop-Up Media on East Java Cultural Diversity Material for Class IV SDN TIRON 4. *Pendas: Scientific Journal of Basic Education*, 8(2), 2126-2135.