

## DEVELOPMENT OF ANIMATED VIDEO LEARNING MEDIA USE APPLICATION CANVA STEAM BASED FOR IMPROVING LEARNING OUTCOMES STUDENTS

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### ABSTRACT

This research is motivated by the lack of technology integration in learning which results in students having difficulty understanding the material, and leads to low learning outcomes. An innovation is needed to support the learning process which is expected to improve student learning outcomes. Therefore, the purpose of this study is to develop and assess the quality of learning media in the form of animated videos using the STEAM-based *Canva application* to improve student learning outcomes in the Enumeration Rules material. This research is a type of R&D development research with the ADDIE model, which consists of five stages: analysis, design, development, implementation, and evaluation. The research subjects included one mathematics teacher and 35 students of class XI F1 of SMA Negeri 8 Muaro Jambi. The results showed that the developed media met the criteria of validity, practicality, and effectiveness. In terms of validation, the percentage of material feasibility reached 91.7% and the design reached 87.5%, which is classified as very valid. Meanwhile, the practicality of implementation, the teacher gave an assessment of 92% and students 90.9% which is also included in the very practical category. Meanwhile, the implementation of media effectiveness is seen from the student response questionnaire, which obtained a score of 88.42% in the very effective category. The results of the average difference test of student learning outcomes showed that the posttest score was better than the pretest score. The comparison results of the average N-Gain score of 0.65 with a percentage of 65% which is included in the fairly effective category. Thus, the STEAM-based animated video learning media using *Canva* is declared suitable for use in the learning process on the Enumeration Rules material for grade XI SMA because it meets the criteria of validity, practicality, and effectiveness.

**Keywords** : animated videos; canva ; STEAM; student learning outcomes

### ABSTRAK

Penelitian ini dilatarbelakangi oleh kurangnya integrasi teknologi dalam pembelajaran, yang menyebabkan siswa kesulitan memahami materi dan mengakibatkan prestasi belajar rendah. Diperlukan inovasi untuk mendukung proses pembelajaran yang diharapkan dapat meningkatkan hasil belajar siswa. Oleh karena itu, tujuan dari penelitian ini adalah untuk mengembangkan dan menilai kualitas media pembelajaran berupa video animasi menggunakan aplikasi *Canva* berbasis pendekatan STEAM untuk meningkatkan hasil belajar siswa dengan topik Aturan Penghitungan. Penelitian ini merupakan jenis studi Penelitian dan Pengembangan (R&D) menggunakan model ADDIE, yang terdiri dari lima tahap: analisis, desain, pengembangan, implementasi, dan evaluasi. Subjek penelitian antara lain seorang guru matematika dan 35 siswa dari Kelas XI F1 SMA Negeri 8 Muaro Jambi. Hasil penelitian menunjukkan bahwa media yang dikembangkan memenuhi kriteria validitas, praktis, dan efektif. Dari segi validasi, persentase kelayakan material mencapai 91,7% dan desainnya mencapai 87,5%, keduanya tergolong sangat valid. Mengenai kepraktisan, guru memberikan peringkat 92% dan siswa memberikan 90,9%, keduanya termasuk dalam kategori

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*sangat praktis. Sementara itu, efektivitas media, berdasarkan kuesioner respon siswa, memperoleh skor sebesar 88,42%, dikategorikan sangat efektif. Hasil uji coba sampel independen hasil belajar siswa menunjukkan bahwa nilai pasca tes lebih baik daripada nilai pra-tes. Perbandingan rata-rata skor N-Gain adalah 0,65, setara dengan 65%, yang dikategorikan sebagai cukup efektif. Dengan demikian, media pembelajaran video animasi berbasis STEAM yang dikembangkan menggunakan Canva dianggap layak untuk digunakan dalam pengajaran topik Aturan Penghitungan untuk siswa SMA Kelas XI karena memenuhi kriteria validitas, kepraktisan, dan efektivitas.*

**Kata kunci:** *Canva; hasil belajar siswa, STEAM; video animasi*



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## Introduction

Along with the development of globalization, the rapid development of ICT has presented various applications that can be used as interactive and interesting learning media. Gita & Zulherman (2021) stated that Information and Communication Technology can be utilized to create engaging and enjoyable learning media. Therefore, with the advancement of technology in various fields, including education, teachers are required to be able to keep up with technological developments and develop learning media.

This media can help students better understand concepts and increase their interest in learning, making them more active and enthusiastic in participating in learning (Adzani et al., 2022; Astuti et al., 2023). This statement is supported by Wardani et al. (2024) who argue that learning media is a tool that has great potential to improve the learning process. Thus, media can be used to encourage students to be more active during learning activities.

Animated videos are a type of learning media that many teachers are interested in. Ponza et al. (2018) explained that animated videos are effective in increasing students' interest in learning while helping them understand the material. The captivating appeal of animated videos often leads students to watch them repeatedly. This view aligns with Saputra et al. (2023) stated that animated videos can change students' perception of mathematics from a boring subject to a fun one. One multimedia application that can be used to create animated videos is *Canva*.

*Canva* serves as a tool that makes it easier for teachers to design engaging learning media, while also helping students understand the material more easily. The resulting media features an attractive design and is equipped with various elements, such as text, video, animation, sound, images, and graphics. Therefore, using *Canva* can support improved student understanding and help teachers create effective learning media to promote optimal learning outcomes.

Learning success is determined not only by the use of media, but also by the approach applied to make the teaching and learning process more effective and engaging. One approach currently developing is STEAM, which encompasses *Science, Technology, Engineering, Arts, and Mathematic*. This approach aims to integrate various disciplines so that students not only understand theoretical concepts but also have critical and creative thinking skills and are able to solve complex problems. According to Atmojo et al (2020) & Agustin et al. (2023), Science, Technology, Engineering, Arts and Mathematics (STEAM) is an educational

approach that uses the five sciences (knowledge, technology, engineering, art and mathematics) comprehensively as a problem-solving pattern.

Effective learning focuses not only on mastery of material but also on comfort, enjoyment, habits, and adaptation to the learning environment (Ricardo & Meilani, 2017; Wati, 2021; Novita et al., 2019). Conventional learning processes often make students less interested in participating in lessons (Dakhi, 2020; Frikas et al., 2024; Estriyanto, 2020; Harefa, 2023). Teachers need to innovate by using learning media that can increase student interest in teaching and learning activities (Mahardika et al., 2022; Limbong et al., 2019; Hasanah et al., 2021). This statement is also supported by Pamungkas & Koeswanti (2021) and Al Mawaddah et al. (2021) argues that learning videos can increase interest and motivation, thereby helping students improve their learning outcomes.

Observations at SMA N 8 Muara Jambi show that students have not utilized a variety of learning media, as teachers still use conventional methods, delivering material through lectures in front of the class and relying solely on printed media such as books. During the learning process, many students do not pay attention to the teacher's explanations, resulting in less than optimal learning effectiveness. This condition makes students easily bored and less interested in the material being presented. Based on these problems, this study aims to develop STEAM-based animated videos using the Canva application to improve the learning outcomes of 11th-grade high school students.

### **Research methods**

The method used in this development research is *Research and Development* (R&D). This development research adopted the ADDIE model. The resulting product is an animated video learning medium created using the *Canva application*.

Each step in this development research is carried out in accordance with the stages set out in the ADDIE model to ensure the development of effective and quality learning media. According to Syarifuddin (2011) & Radiusman (2020), this model is arranged in a programmed manner with a systematic sequence of activities in an effort to solve learning problems related to learning resources that are appropriate to the needs and characteristics of learners. This model consists of five steps, namely: analysis (*analyze*), design (*design*), development (*development*), implementation (*implementation*), and evaluation (*evaluation*). Visually, the stages of the ADDIE Model can be seen as consisting of five stages/steps as follows Figure 1.

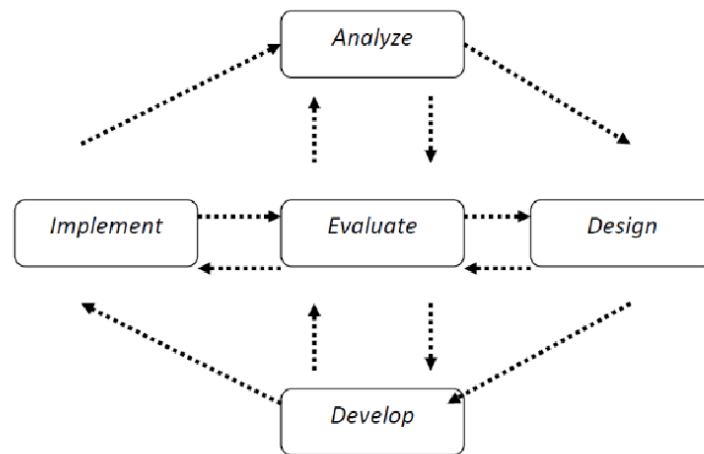


Figure 1. ADDIE Model Stage Chart

Based on Figure 1 explained *The stages of the ADDIE model* are :

1. The analysis stage ( *analyze* ) is carried out to collect data or information needed to support the process of developing animated video learning media using the *Canva application* .
2. *design* stage is carried out to design a product in the form of an animated video for learning mathematics using the *Canva application*. based on the STEAM approach.
3. *development* stage includes activities such as collecting teaching materials, making illustrations, typing, and other activities at this development stage.
4. *implementation* stage is carried out using animated video learning media using the *Canva application*. and using the STEAM model has been declared valid, practical, and effective, tested on all class XI F1 students of SMA Negeri 8 Muaro Jambi
5. *evaluation* stage aims to assess or estimate the quality of animated video learning media using *the Canva application* and using the STEAM model to improve the learning outcomes of class XI high school students.

#### *Validity Test*

The validation process was carried out to measure the quality of the animated video learning media product based on the *Canva application* , both in terms of instruments, materials, and design. The validation instrument used was a questionnaire, which consisted of several types, namely, a material validation questionnaire, a design validation questionnaire, a teacher's practicality questionnaire (through individual trials), a student's practicality questionnaire (through small group trials), a student's effectiveness questionnaire (through student response questionnaires ), and student learning outcome test questions ( *pretest and posttest* ). The following is a Table 1. of the results of the research instrument validation:

Table 1. Research instrument validation results

Validation Instrument Study	Total Score	Max Score	Percentage	Category
Material validation questionnaire	35	40	87.5%	Very Valid
Design validation questionnaire	44	50	88%	Very Valid
Practicality questionnaire (teacher)	35	40	87.5%	Very Valid
Practicality questionnaire (students)	35	40	87.5%	Very Valid
Effectiveness Questionnaire (student responses )	39	45	86.6%	Very Valid
Student learning outcome test sheet	38	45	84.4%	Very Valid

Based on Table 1, the results of the research instruments were found, several findings were obtained as follows, on the material validation questionnaire instrument, an assessment score of 35 was obtained from a maximum score of 40, with a percentage of 87.5% which is included in the very valid category. The design validation questionnaire instrument obtained a score of 44 from a maximum score of 50, with a percentage of 88% and a very valid category. The practicality questionnaire instrument for teachers showed a score of 35 from 40, with a percentage of 87.5% and a very valid category. Meanwhile, the practicality questionnaire for students also obtained a score of 35 from 40, with the same percentage, namely 87.5%, and a very valid category. The effectiveness questionnaire instrument based on student responses obtained a score of 39 from 45, with a percentage of 86.6% which is also included in the very valid category. The student's mathematical creative thinking ability test sheet instrument obtained a score of 38 from a maximum score of 45, with a percentage of 84.4% and a very valid category.

Next, material validation was carried out on several aspects, including component feasibility, content feasibility, language, STEAM stage aspects, and suitability of student learning outcome indicators. The material validation process was carried out by a material expert, namely Mrs. Feri Tiona Pasaribu, S.Pd., M.Pd., CIT., who is a lecturer in the Mathematics Education Study Program at the University of Jambi. The validation results by the material expert obtained a total score of 86 out of a maximum score of 95, with a percentage of 90.5% which is included in the very valid category. Thus, it can be concluded that the STEAM-based animated video learning media developed using the *Canva application* has been declared feasible and can be used in research to improve student learning outcomes.

After the validation process by the material expert was completed, the next stage was design validation, which was carried out by Mrs. Feri Tiona Pasaribu, S.Pd., M.Pd., CIT. as a design expert validator and also a lecturer at the Mathematics Education Study Program, University of Jambi. Design validation was carried out to assess the level of validity of the animated video learning media product based on the Canva application with the STEAM approach developed by the researcher, so that the resulting product has good quality and is suitable for use in the learning process. The validation results by the design expert obtained a score of 76 out of a

maximum score of 80, with a percentage of 95% included in the very valid category. Therefore, it can be concluded that the animated video learning media is suitable and can be used in the learning process.

*Product Trial*

The subjects in this research trial included teachers and students of class XI F1 of SMA Negeri 8 Muaro Jambi. The trial was carried out in stages, starting from an individual trial by one of the mathematics teachers at SMA N 8 Muaro Jambi, followed by a small group trial involving 6 students with low, medium, and high ability levels, as well as a large group trial that included all students of class XI F1 of SMA N 8 Muaro Jambi. The purpose of this series of trials is to assess the quality and effectiveness of animated video learning media using the *Canva application* and using the STEAM ( *Science , Technology, Engineering , Art and Mathematics* ), by providing test questions and response questionnaires after using the media to improve student learning outcomes.

The mathematics teacher's evaluation of the animated video learning media using the Canva STEAM app resulted in a score of 69 out of a maximum of 75, or 92%. Therefore, the animated video learning media developed using the Canva app is classified as very practical.

The results of the small group trial assessment of STEAM-based animated video learning media can be seen in the following Table 2.

Table 2. Results of Small Group Trials

Aspect	Approval Level					Total
	Don't agree	Disagree Less	Enough Agree	Agree	Strongly agree	
Aspect Serving Benefit Aspects	-	-	-	68	115	191
	-	-	-	44	64	109
Total scores obtained						300
Total score						330
Practicality results						90.9%

Based on Table 2, the results of the practicality questionnaire assessment by students are presented in the table, with a practicality percentage of 90.9%. Therefore, the STEAM-based animated video learning media developed using the *Canva application* can be categorized as Very Practical.

**Results and Discussion**

The learning activities using animated video learning media were conducted over three sessions. Before the first session, students took a *pretest* to assess their initial abilities. The next three sessions were devoted to the learning process, utilizing animated video learning media using Canva. After the three sessions, a *posttest was administered*. to measure student learning outcomes after using learning media, as well as filling out response questionnaires or effectiveness questionnaires by students, in order to determine the level of effectiveness of the learning media products that have been developed. The stages or steps in the

learning process implemented in class XI F1 of SMA Negeri 8 Muaro Jambi are as follows.

#### *Implementation of the Pretest*

Before starting learning activities using animated video media using the STEAM-based *Canva application*, a pre-test was carried out towards students to measure the level of understanding of class XI F1 students regarding the material on enumeration rules. The pretest scores of class XI F1 students at SMA Negeri 8 Muaro Jambi are presented in the following Table 3.

Table 3. Pretest Results

Score	Many Students	Category	Information
20	14	Low	Not Completed
25	4	Low	Not Completed
30	3	Low	Not Completed
35	5	Low	Not Completed
40	7	Low	Not Completed
45	2	Low	Not Completed

Based on Table 3, the pretest results shown in the table show that the average pretest score of class XI F1 students of SMA Negeri 8 Muaro Jambi is 29.14, which is included in the low and incomplete category based on the Learning Objective Achievement Criteria (KKTP) set, namely a score above 75. This shows that the level of students' understanding of the material is still at a very low level.

#### *Learning Process*

The series of learning activities using STEAM-based animated videos during three meetings are presented as follows:

##### *The first meeting*

1. In the "Discovering Problems and Solutions" stage, researchers guide students in a discussion to identify the core problem and formulate appropriate solutions. This approach aims to help students understand the problem-solving patterns expected in the context of animated video-based learning.
2. In the "Imagine" stage, students are given the freedom to imagine and express opinions or ideas regarding various strategies for solving the given problem. Researchers give each student the opportunity to propose as many alternative problem-solving strategies as possible.
3. In the "Planning" stage, the researcher provides students with the opportunity to discuss the opinions and strategies presented in the previous stage to determine the most appropriate strategy for solving the problem. Through joint discussions between students and the researcher, as well as a selection of the various solutions presented, the most relevant and effective strategy for resolving the problem is identified.

4. In the "Create and Test" stage, students begin applying their chosen strategies to solve the given problem. The researcher then asks students to solve the problem according to their chosen approach.

#### *Second Meeting*

1. In the "Discovering Problems and Solutions" stage, researchers guided students in identifying the core of the problem and provided further explanation through animated videos, enabling them to understand the types of solutions expected in the problem-solving process. Students were then tasked with creatively solving the problem by creating a video using the Canva app.
2. In the "Imagine" stage, students were given the freedom to express various opinions and strategies for solving the presented problems. The researcher also opened a question-and-answer session, giving students the opportunity to ask questions related to solving the problems presented in the animated video.
3. In the "Planning" stage, students focused on appropriate problem-solving strategies and considered how to create an animated video that would be engaging and easy to understand. Next, researchers evaluated and selected various ideas about problem-solving strategies to use in solving the problem, as well as creating an engaging animated video that would be watchable and easy to understand.
4. In the "Creating and Testing" stage, students are asked to determine the strategy or method used to solve the problem, and to work on it according to the instructions given through the animated video.

#### *Third Meeting*

1. In the "Discovering Problems and Solutions" stage, researchers presented a contextual problem through an animated video. Students were asked to carefully examine the presented problem scenario, which would then be analyzed and discussed further.
2. In the "Imagine" stage, students are given the freedom to explore and express opinions or ideas regarding various approaches to solving the presented problem. Researchers encourage each student to propose as many alternative problem-solving strategies as possible.
3. In the "Planning" stage, the researcher facilitates students' discussion of the ideas and strategies proposed in the previous stage, with the goal of selecting the best approach to solving the problem. Through collaborative discussions between students and the researcher, as well as a selection process of various proposed solutions, the strategy deemed most appropriate and efficient for resolving the problem at hand is ultimately determined.
4. In the "Create and Test" stage, students begin to apply the chosen strategy to solve the given problem. Researchers guide students to complete the assignment according to the approach they previously formulated.

#### *Implementation and N-Gain Calculation*

In this meeting, researchers conducted a *posttest* to measure improvements in learning outcomes after using STEAM-based animated video learning media developed with the Canva application. In the *posttest*, each student

was given five questions designed based on learning achievement indicators for the enumeration rules material. The posttest scores for grade XI F1 students at SMA Negeri 8 Muaro Jambi are presented in the following Table 4.

Table 4. *Pretest results*

Score	Many Students	Category	Information
50	1	Low	Not Completed
55	1	Low	Not Completed
60	1	Currently	Not Completed
65	4	Currently	Not Completed
70	6	Currently	Completed
75	5	Currently	Completed
80	6	Tall	Completed
85	5	Tall	Completed
90	5	Tall	Completed
95	1	Tall	Completed

Posttest data As presented in the Table 4., the average score of class XI F1 students at SMA Negeri 8 Muaro Jambi was 76.28, which is included in the "Moderate" category. Of the total 35 students, 18 students showed learning outcomes in the high category, 15 students in the medium category, and 2 students in the low category. Regarding learning completeness, 28 students were declared complete, while 7 other students were classified as incomplete, based on the established Learning Objective Achievement Criteria (KKTP).

These results indicate that learning using STEAM-based animated video media developed through the Canva application has a positive impact on improving student learning outcomes. This improvement is also strengthened through the calculation of gain values. Based on the results of the N-Gain calculation, out of 35 students of class XI F1 of SMA Negeri 8 Muaro Jambi, it is known that 12 students experienced an increase in learning outcomes in the high category, 19 students in the medium category, and 4 students in the low category. The average N-Gain value obtained was 0.65 which is included in the medium category, with an effectiveness percentage of 65%, which is classified as quite effective. Thus, it can be concluded that there is a significant increase in student learning outcomes, as seen from the comparison of *pretest* and *posttest scores*. Therefore, the STEAM-based animated video learning media developed using the Canva application is declared suitable for use in the learning process.

#### *Student Effectiveness Questionnaire*

The next step was to administer a student response questionnaire (effectiveness questionnaire) to class XI F1 students of SMA Negeri 8 Muaro Jambi. This questionnaire aimed to determine students' responses to the STEAM-based

animated video learning media developed using the Canva application. In filling out the questionnaire, students were asked to assess the learning media based on several aspects, namely: material content, suitability to learning objectives, language, and media function. The assessment data from the student response questionnaire on the animated video learning media can be seen in the following Table 6.

Table 6. Results of the Student Effectiveness Questionnaire

Criteria	Level of Unity					Total
	TS	KS	CS	S	SS	
Content Eligibility	-	-	-	240	225	465
Learning objectives	-	-	-	164	145	309
Linguistics	-	-	-	168	140	308
Functions of Animated Video Learning Media	-	-	-	400	375	775
Score obtained						1,857
Maximum Score						2,100
Percentage						88.42%
Category						Very Effective

Based on Table 6., the results of the student response questionnaire (effectiveness questionnaire) presented in the table above showed a percentage of 88.42%, which is categorized as very effective. Thus, the STEAM-based animated video learning media developed through the Canva application is declared highly effective in supporting the learning process.

Animated video learning media developed with the STEAM-based Canva application is designed to improve student learning outcomes through the ADDIE development model approach. This model includes several stages, namely analysis, design, development, and implementation. Referring to the opinion of Ruswan et al. (2024) & Sa'idah (2021), the analysis stage involves activities such as competency analysis, student characteristics, and learning materials. The results of the analysis indicate that there are obstacles in the learning process at SMA Negeri 8 Muaro Jambi, such as the use of less than optimal learning methods or models that cause a passive classroom atmosphere and difficult for students to understand the material. In addition, the learning media used are still limited and less interesting, which has an impact on low learning outcomes and students' creative thinking skills.

After completing the analysis stage, the next process is the design stage *with* several main steps including making a *flowchart*, writing a *storyboard*, and collecting graphic elements. The next step is the development stage, namely the researcher begins to produce learning media in the form of STEAM-based animated videos by utilizing the Canva application as the main media in creating animations, as well as using supporting applications such as CapCut to combine videos with sound elements. The product that has been developed will then go through a series of evaluations including aspects of validity, practicality, and effectiveness. The next stage is the implementation stage which is carried out by involving all 35 students of class XI F1 of SMA Negeri 8 Muaro Jambi, through 5 meetings. The series of meetings consists of implementing a *pretest*, 3 meetings for learning activities using

animated video media , and implementing *a posttest* and filling out a questionnaire regarding student responses to the learning media used.

According to Rosyada & Ansori (2024), Putri et al. (2023) a product is considered high-quality if it is valid, practical, and effective. Validity is achieved by media and material validators . Practicality is achieved by students easily using the product. Effectiveness is achieved by achieving complete student learning outcomes and positive student responses . Based on these criteria, the developed learning media meets the requirements for a valid, practical, and effective product.

Based on the assessment results from material experts and design experts, the validation percentage for the material validation questionnaire and for the design validation questionnaire was obtained. Both results are in the very valid category. Therefore, it can be concluded that the STEAM-based animated video learning media developed using the Canva application is declared valid and suitable for use in research to improve student learning outcomes. Based on the results of the practicality questionnaire assessment completed by students and teachers, it is categorized as very practical and is considered effective in supporting the learning process. The effectiveness of the STEAM-based animated video learning media developed using the Canva application in improving student learning outcomes is evaluated through two main instruments, namely student learning outcome tests and effectiveness questionnaires (student responses).

Student learning outcomes before the implementation of STEAM-based animated video learning media developed through the Canva application were shown through pretest scores that were categorized as low. After using the media in the learning process, students' posttest scores showed an increase that was included in the moderate category. The calculation of the average N-Gain value indicated an increase in learning outcomes in the moderate category. So the percentage of effectiveness based on the N-Gain score reached the category of quite effective. Student assessments through an effectiveness questionnaire on animated video learning media showed results that were included in the very effective category. The development of STEAM-based animated video learning media using the *Canva application* to improve student learning outcomes proved that the resulting product had met the eligibility criteria as a learning medium. This eligibility was seen from the fulfillment of three main indicators, namely validity, practicality, and effectiveness. Therefore, the animated video learning media was declared feasible and can be used in the learning process.

## **Conclusion and Suggestions**

Animated Video Learning Media Using *the Canva Application* Based on STEAM ( *Science , Technology, Engineering , Art, and Mathematics* ) To Improve Student Learning Outcomes on Enumeration Rules Material for Grade XI Senior High School , evaluated based on three aspects of feasibility, namely validity, practicality, and effectiveness. In terms of validity, this media is assessed through a validation questionnaire by experts, namely material experts and design experts. Based on the results of the assessment from material experts and design experts, the validation percentages were obtained at 90.5% for the material validation questionnaire and 95% for the design validation questionnaire. Both results are in the very valid category. For the practicality aspect, the assessment was carried out through a

questionnaire given to teachers and students. The teacher gave an assessment with a practicality percentage of 92% which is included in the very practical category. While the student assessment showed a practicality of 90.9% which is also in the very practical category. The effectiveness aspect was assessed through a student response questionnaire with a result of 88.42% including the very effective category. In addition, the effectiveness of the media is also seen from the results of the student learning outcome test. In the *pretest stage*, before the use of the media, the average student score was 29 which is classified as low. After the learning process with animated video learning media using the STEAM-based Canva application, the average *posttest score* increased to 6.28, which is included in the moderate category. The calculation of the average *N-Gain value* shows a figure of 0.65, which indicates an increase in learning outcomes in the moderate category. In addition, the percentage of effectiveness based on the *N-Gain score* reached 65%, which is included in the fairly effective category. Thus, it can be concluded that there is an increase in student learning outcomes after participating in learning using STEAM-based animated video media developed through the Canva application.

Researchers suggest that STEAM-based animated video learning media developed through the Canva application can be utilized as an alternative learning medium to support teachers in delivering material. Furthermore, this media can be used by students independently or in group activities as an interactive and flexible learning tool. For further development, researchers are advised to use a Canva subscription or *Canva Pro* to facilitate more efficient and integrated presentation of material in the learning media.

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