

**Research Article**

## Canva Based 2D Animated Learning Video Development

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### Abstract

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#### Keywords:

Canva, Learning Animation Videos, 2D Animated Videos, learning animations

This study aims to find out the implementation of Canva in making 2D learning animation videos for grade 1 mathematics in elementary school by developing learning media in the form of 2D animation videos using Canva. The data collection in this study is in the form of information related to learning methods in elementary schools in general and the application of Canva to animated videos. This research instrument is a questionnaire that contains written statements to material experts and media experts to test the feasibility of the Canva Implementation research in Making 2D Mathematics Learning Animation Videos for Grade 1 Elementary School. The results of the research on Canva's Implementation in the Making of 2D Learning Animation Videos for Mathematics Grade 1 Elementary School, it was concluded that the implementation of Canva in making learning animation videos is very feasible and can be implemented in learning media in elementary schools. This was obtained from the validity test of Media Experts with a percentage of 98% and the results of the validity test of 90% as well as the suitability of the materials and research methods with the opinions of experts related to this research.

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### Introduction

Video in general is an audio-visual medium. The video shows a combination of image and sound technology that go hand in hand to create a dynamic and engaging show. In addition, videos can display an object in detail according to needs, can be saved in the form of digital format files so that they are easy to use, carry and can reach a wide audience (Sari'ani et al., 2023).

2D animated videos can be used to help in the learning process in schools by all educators in schools, especially in elementary schools. 2D learning animation videos can affect students' thoughts, feelings, and motivation through moving images (Fitriana in Andrasari et al., 2022). The learning animation video indicators are divided into several parts: 1. Media used, 2. Material, 3. Language, 4.

Display (Riyanti & Jarmita, 2021), 5. Duration (Hapsari & Zulherman in Mustaqimah, 2023).

Animated videos display the movement of an object or image within a certain period of time so that it forms a movement and is accompanied by supporting audio (Apriansyah et al., 2020). The types of animation are varied, including 2D animation, 3D animation, stop motion animation, motion graphic animation (Nastiti et al., 2021). Each type of animation has its own appeal and has a different level of difficulty to create. Among these types of animations, 2D animation is relatively easy to make. That's because 2D animation only combines several objects or images to produce moving images, so anyone can create 2D animations.

The application of learning media in the form of animated videos requires tools in the form of

applications or software to support the creation of animated videos. Therefore, the tool in the form of an application used in the implementation of this learning animation video uses the Canva application. Canva is an online-based digital application that can be accessed through web browsers, mobile phones, laptops, computers, and IOS (Putra et al., 2023). Canva offers a variety of interesting features, including the availability of various templates, signs, fonts, and graphics. In addition, Canva also provides features that make it easier for its users to create posters, brochures, invitations, edit photos, edit videos, and attractive presentation templates.

Canva provides an interface that is tailored to your needs and easy to use even for users who don't have a graphic design background (Saraswati & Setiastuti, 2023). The Canva indicators include: 1. Diverse features, 2. Ease of use, 3. Cost efficient (Riyanti & Jarmita, 2021).

Mathematics is a universal science that has an important role in various disciplinary issues and helps in the development of human thinking, besides that mathematics is also the basis for the development of modern technology. Therefore, mathematics subjects must be given to all students from elementary school to high school levels in order to equip students with logical, systematic, analytical, critical and creative thinking skills and so that students are able to solve problems that occur in daily life (Dwicaksono, 2020).

Getting to know diagrams is one of the chapters included in the 1st grade Mathematics subject of elementary school. With the chapter on getting to know diagrams, students are required to be able to present data or visualization of data, instructions or certain information such as grouping data in the form of lists and tables, and diagrams. However, not a few educators still only race on conventional media in learning activities. By relying only on conventional media in mathematics learning, it certainly makes it difficult for some students to understand the material being taught, resulting in students being bored and less enthusiastic in learning.

The application of learning media can be one of the efforts and solutions so that learning activities can be carried out as well as possible. The application of 2D learning animation videos using Canva will provide a memorable learning experience for students, various features, templates, and images can be used to make learning animation videos more interesting and creative, therefore math subjects will feel easier and more fun.

Based on the presentation of the above problems, this study takes the title Implementation of Canva in Making Animated Videos for 2D Learning Mathematics Grade 1 Elementary School.

## Materials and Methods

The type of data applied in this study is a type of quantitative data. The type of quantitative data in this study was used to test the effectiveness of the product obtained through a service test questionnaire aimed at media experts and subject matter experts.

The type of research used in the research titled Implementation of Canva in the Making of 2D Mathematics Learning Animation Videos for Grade 1 Elementary School is research and development. Research and development is a research method used to produce a specific product and test the effectiveness of that product. The research in this study is by collecting data in the form of information related to learning methods in elementary schools in general and the application of Canva to animated videos. Meanwhile, development is to develop animated videos as a learning medium for mathematics for grade 1 elementary school using the Canva application.

## Results and Discussion

After going through various stages from the pre-production process to the post-production of the 2D learning animation video in this study, then a descriptive approach is carried out by analyzing the results of data collection in the form of information to find out the results of the research that has been carried out.

The first results were obtained from a questionnaire that had been validated by Media Expert 1. Media Expert 1 of this study is Mrs. Chusnul Islamiyah who provided an assessment of the feasibility of the implementation of Canva in making 2D learning animation videos for grade 1 elementary mathematics. Mrs. Chusnul Islamiyah is an educator of the Multimedia Department from SMK Negeri Rengel. The validity test of media experts was carried out on November 13, 2024 online with the following results:

Table 1 Media Expert Questionnaire 1

Y es	Indicat or	Statement	Answer				
			SS 5	S 4	K S 3	T S 2	ST S 1
1	Miscel laneou s Featur es	Canva implem entatio n is very appropri ate to use to create learning animation videos	✓				
		Many menus are available that can be used	✓				

		A variety of attractive templates available	✓				
		Can download elements, characters, and images through canva	✓				
2	Ease of use	The canva app is very easy to use	✓				
		The canva app is easy to use even for users who don't have a graphic design background	✓				
		Canva App can be accessed via Website, Android, IOS, Laptop, and Computer	✓				
3	Cost-efficient	Canva available for free version	✓				
		In the Canva free application, there are many free menus that can be used		✓			
		Canva with the premium version is not too expensive		✓			

Source: Personal Data, 2024

Based on the assessment of the questionnaire conducted by Media Expert 1, percentage data was obtained using the following formula:

**Information:**

1. Strongly agree  $8 \times 5 = 40$
2. Agree  $2 \times 4 = 8$
3. Total  $F = 48$
4. Total  $N = 50$

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{48}{50} \times 100\%$$

$$P = 96\%$$

The second result was obtained from a questionnaire that had been tested validated by Media Expert 2. The Media Expert 2 of this study is Mr. M Arsyad Zano Fawaid who provided an assessment of the feasibility of the implementation of Canva in making 2D mathematics learning animation videos for

grade 1 elementary school. Mr. M Arsyad Zano Fawaid is an educator of the Multimedia Department from SMK Negeri Rengel. The validity test of media experts will be carried out on November 15, 2024 online with the following results:

Table 2 Media Expert Questionnaire 2

Yes	Indicator	Statement	Answer				
			SS 5	S 4	K S 3	T S 2	STS 1
1	Miscellaneous Features	Canva implementation is very appropriate to use to create learning animation videos	✓				
		Many menus are available that can be used	✓				
		A variety of attractive templates available	✓				
2	Ease of use	Can download elements, characters, and images through canva	✓				
		The canva app is very easy to use	✓				
		The canva app is easy to use even for users who don't have a graphic design background	✓				
		Canva App can be accessed via Website, Android, IOS, Laptop,	✓				

		and Computer					
3	Cost-efficient	Canva available for free version	✓				
		In the Canva free application, there are many free menus that can be used	✓				
		Canva with the premium version is not too expensive	✓				

Source: Personal Data, 2024

Based on the assessment of the questionnaire conducted by Media Expert 2, percentage data was obtained using the following formula:

**Information:**

Strongly agree  $10 \times 5 = 50$   
 Total  $F = 50$   
 Total  $N = 50$

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{50}{50} \times 100\%$$

$$P = 100\%$$

So that the respondents' answers from the statements of media experts above can be analyzed through the opinions of several experts in previous studies such as several indicators in the following research.

**Miscellaneous Features**

Canva implementations are very appropriate to use to create learning animation videos. This statement is in accordance with the opinion of Rizanta & Arsanti, (2022), Canva offers a variety of video templates for free that educators can use to create learning videos for various subjects and levels of education.

Many menus are available that can be used. This statement is in accordance with the opinion of Saraswati & Setiastuti, (2023), Canva is an application that offers attractive designs in the form of templates, features and various categories that can be accessed online.

There are a variety of interesting templates. This statement is in accordance with the opinion of

Syahrir *et al.*, (2023), with a variety of editing options, Canva is referred to as a web-based platform that makes it easier for users to create various types of visual content, such as flyers, posters, infographics, banners, invitation cards, presentations, Instagram feeds, and covers. In addition, Canva provides a variety of tools for image editing, photo filters, photo frames, stickers, icons, and grid patterns. Canva makes it easy for its users so that beginners can learn the basics of design before creating a professional design.

You can download elements, characters, and images through Canva. This statement is in accordance with the opinion of Merrisa Monoarfa & Haling, (2021) canva is an online-based digital design program that provides various visual content needs such as presentations, resumes, posters, pamphlets, graphics, brochures, infographics, banners, bulletins, bookmarks, and the Canva application still provides more design tools that its users need.

**Ease of Use**

The Canva app is very easy to use. This statement is supported by the opinion of Hijrah *et al.*, (2021), Canva is an online-based graphic design application that allows its users to design various creative materials, such as greeting cards, brochures, posters, infographics, and presentations. Canva is available in web, iPhone, and android versions.

The Canva app is easy to use even for users who don't have a graphic design background. This statement is supported by the opinion of Siwi Satiti *et al.*, in Warisaji & Rosyidah, (2024), Canva is a graphic design application that makes it easier for beginners or users who do not understand graphic design.

The Canva app can be accessed via Website, Android, IOS, Laptop, and Computer. This statement is supported by the opinion of Hijrah *et al.*, (2021), Canva is an online-based graphic design application that allows its users to design various creative materials, such as greeting cards, brochures, posters, infographics, and presentations. Canva is available in web, iPhone, and android versions.

**Cost-Efficient**

Canva is available for free. This statement is supported by the opinion of Syahrir *et al.*, (2023), Canva consists of 5 parts, canva free, canva pro, canva enterprise, canva education, and canva non-profit.

In the Canva free application, there are many free menus that can be used. This statement is in accordance with the opinion of Handayani Parinduri, (2023), of the many graphic design applications available *Canva* is one of the best

graphic design options free of charge that provides a variety of features.

Canva with the premium version is not too expensive. This statement is in accordance with Canva's opinion, (2024), the free version of Canva is suitable for beginners. As for a better experience, exploring various features is more complete and professional is by subscribing to canva pro, to subscribe to canva pro in the first month is Rp. 47,500

Furthermore, analysis by material experts. The Subject 1 expert of this study is Mrs. Suwartiah who provided an assessment of the feasibility of the material from the canva implementation research in making 2D learning animation videos for grade 1 mathematics in elementary school. Suwartiah is an educator at SD Negeri 1 Sumurcinde. The validation test for material experts was carried out on November 15, 2024 online with the following results:

Table 3 Subject Expert Questionnaire 1

Yes	Indicator	Statement	Answer				
			SS5	S4	KS3	TS2	STS1
1	Media used	This 2D learning animation video is precisely used in learning	✓				
		2D learning animation videos will make learning more fun and easy		✓			
		Video media is either used in the process of delivering material or learning, because it can be replayed and stopped as needed		✓			
2	Material	Writing learning animation video materials according		✓			

		to the theme and title (Getting to Know the Diagram)					
		Learning materials are packed with interesting and creative learning animation video displays		✓			
		The material from this learning animation video is easy to understand		✓			
3	Language	The language used in this animated video is in accordance with the rules of the Indonesian language		✓			
		Language is easy to understand		✓			
4	Display	Interesting animated video display		✓			
		The colors used in the animated video are just right		✓			
5	Duration	The duration of this learning animation video is appropriate for 1st grade elementary school children		✓			
		The duration of the		✓			

		animated video is enough to convey the material according to the title					
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Source: Personal Data, 2024

Based on the assessment of the questionnaire conducted by Subject Expert 1, percentage data was obtained using the following formula:

**Information:**

1. Strongly agree  $1 \times 5 = 5$
2. Agree  $11 \times 4 = 44$
3. Total  $F = 49$
4. Total  $N = 60$

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{49}{60} \times 100\%$$

$$P = 81\%$$

The second result was obtained from a questionnaire that had been tested validated by Material Expert 2. The Subject 2 expert from this study is Mrs. Siti Muallimah who provides an assessment of the feasibility of the implementation of Canva in making 2D learning animation videos for mathematics grade 1 elementary school. Mrs. Siti Muallimah is a private employee. The validity test of media experts was carried out on December 5, 2024 online with the following results:

Table 4 Subject Matter Expert Questionnaire 2

Yes	Indicator	Statement	Answer				
			SS 5	S 4	K S 3	T S 2	S T S 1
1	Media used	This 2D learning animation video is precisely used in learning	✓				
		2D learning animation videos will make learning more fun and easy	✓				
		Video media is either used in the process of delivering material or	✓				

		learning, because it can be replayed and stopped as needed					
2	Material	Writing learning animation video materials according to the theme and title (Getting to Know the Diagram)	✓				
		Learning materials are packed with interesting and creative learning animation video displays	✓				
		The material from this learning animation video is easy to understand	✓				
3	Language	The language used in this animated video is in accordance with the rules of the Indonesian language	✓				
		Language is easy to understand	✓				
4	Display	Interesting animated video display	✓				
		The colors used in the animated video are just right	✓				
5	Duration	The duration of this learning animation video is appropriate for 1st grade elementary school children	✓				

		The duration of the animated video is enough to convey the material according to the title	✓				
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Source: Personal Data, 2024

Based on the assessment of the questionnaire conducted by Subject Matter Expert 2, percentage data was obtained using the following formula:

**Information:**

1. Setuju  $12 \times 5 = 60$
2. Total  $F = 60$
3. Total  $N = 60$

$$P = \frac{F}{N} \times 100\%$$

$$P = \frac{60}{60} \times 100\%$$

$$P = 100\%$$

So that the respondents' answers from the statements of media experts above can be analyzed through the opinions of several experts in previous studies such as several indicators in the following research.

**Media used**

1. This 2D learning animation video is appropriate for use in learning. This statement is in accordance with the opinion (Fitriana in Andrasari *et al.*, 2022), 2D animated videos can be used to help in the learning process at school by all educators in schools, especially in elementary schools. 2D learning animation videos can affect students' thoughts, feelings, and motivation through moving images.
2. 2D learning animation videos will make learning more fun and easy. This statement is in accordance with Ketut's opinion in Dheadema *et al.*, (2023), video learning media can increase students' interest and interest in learning, making learning time more effective and easy to use by students because it can be accessed through smartphones anytime and anywhere.
3. Video media is either used in the process of delivering material or learning, because it can be replayed and stopped as needed. This statement is in accordance with animated videos as a learning medium explained by Munir in Mashuri (2020), Video can decompose a process and event in detail and real, besides that video is durable and the level of damage is small so that it can be used repeatedly according to needs.

**Material**

Writing learning animation video material according to the theme and title (Getting to Know the Diagram). This statement is in accordance with the opinion (Lestari in Djumingin *et al.*, 2022), material is referred to as an intermediary or means of learning that includes materials, methods, limitations, and assessment approaches that are well designed to achieve the expected competencies

The learning materials are packed with interesting and creative learning animation video displays. This statement is in accordance with Ketut's opinion in Dheadema *et al.*, (2023), that the existence of learning media in the form of videos can help students listen, understand, and memorize abstract material.

The material from this learning animation video is easy to understand. This statement is in accordance with Kosasih's opinion in (Rahmawati & Parimbawa, 2023), the characteristics of teaching materials are as follows: 1) teaching materials contain systematic knowledge, 2) teaching materials are in accordance with the curriculum and in accordance with learning objectives, 3) teaching materials help students understand the material.

**Language**

The language used in this animated video is in accordance with the rules of the Indonesian language. This statement is in accordance with the opinion (Madina, 2019), the correct Indonesian language is when the Indonesian language is used in accordance with the rules or conventions of the Indonesian language.

The language is easy to understand. This statement is in accordance with the opinion (Indah Farikh Khayati, 2024), speaking well and correctly is the key to successful communication.

**Display**

Interesting animated video display. This statement is in accordance with the opinion (Humaidi *et al.*, 2022), it is very important to consider the visual appearance when making learning videos, namely by paying attention to the way the demonstration is presented and the structure of the material delivery so that students show more interest and confidence after using learning media.

The colors used in the animated video are just right. This statement is in accordance with the opinion (Fajar Paksi, 2021), one of the factors that affect human behavior is color. The power of color can represent situations and circumstances as an attempt to form perceptions that lead to spontaneous expressions of thought, such as likes and dislikes. Therefore, colors have a strong

character identity, which helps a person understand what they like.

### Duration

1. The duration of this learning animation video is appropriate for 1st grade elementary school children. This statement is in accordance with the opinion (Mega *et al.*, 2020), the ideal duration for making a learning video ranges from 6-10 minutes, with the following duration the learning video must maximize the material to be studied by adjusting the needs of students.
2. The duration of the animated video is enough to convey the material according to the title. This statement is in accordance with the opinion (Mega *et al.*, 2020), the ideal duration for making a learning video ranges from 6-10 minutes, with the following duration the learning video must maximize the material to be studied by adjusting the needs of students.

### Conclusion

From the results of the research on the Implementation of Canva in the Making of 2D Learning Animation Videos for Mathematics Grade 1 Elementary School, it was concluded that the implementation of Canva in making learning animation videos is very feasible and can be implemented in learning media in elementary schools. This can be proven through the results of the validity test of the questionnaire by the Media Expert with a percentage result of 98% and the result of the validity test percentage of the Subject Expert of 90% as well as the suitability of the material and research method with the opinions of experts related to this research.

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