



## Development of Animated Videos on Pasta Material as Learning Media for Class

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### ABSTRACTS

Research on the development of animated video learning media on pasta material has objectives including: (1) developing animated video learning media on pasta material in the Food Processing and Presentation subject; (2) determine the suitability of the results of the animated pasta video product based on the assessment of validators consisting of material experts, language experts and media experts. The method in this research is research and development (R&D) with a 4D development model (define, design, develop and disseminate) which is limited to the development stage with expert appraisal or validation by material experts, language experts and media experts. Data collection was carried out by means of interviews, literature studies and expert validation sheets. The results obtained from this research are: (1) The animated video media for pasta material in the Food Processing and Serving subject was developed through three stages including the define, design and develop stages. (2) The results of the feasibility of the pasta material animation video based on the expert appraisal validation process by material experts, language experts and media experts stated that it was suitable for use as a learning medium.

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## 1. INTRODUCTION

In the 21st century, it is possible that education is not only carried out directly in schools but can also be carried out anywhere thanks to the rapid development of technology. Better yet, the implementation of education can be combined between direct and online teaching. Sanurdi (2020) stated that Hybrid learning is a learning method that combines face-to-face and online teaching. In its application, online learning has disadvantages, one of which is that it can affect students' interest in learning. In line with the results of research conducted by Yunita and Hanifah (2020), it is known that online learning affects students' interest in learning because it is less interesting and makes students easily bored. This becomes a reference for teachers to ensure the learning process can be interesting and effective.

Based on information obtained through teaching experience during PPLSP activities at SMKN 2 Baleendah Bandung in 2020. The results of the needs analysis showed that teachers delivered learning material only via WhatsApp message where the learning media used is conventional learning media. Meanwhile, amidst online learning which is currently being implemented, learning media can make it easier for teachers to deliver learning material and increase students' interest in learning. This affects students' understanding, one of which is the pasta material, only around 80% of students from class XI have difficulty understanding the various forms of pasta and several terms in the material. Therefore, learning media is needed that can attract students' interest in learning, especially in pasta material.

Utilizing technology-based learning media is one strategy that can increase student interest (Novilanti and Suripah, 2021). One technology product is multimedia, learning videos are multimedia products that are easy to use by teachers and students. Learning videos are audio-visual media that are used to stimulate students' thoughts, feelings and motivation to learn by displaying ideas, messages and information (Wisada and Sudarma, 2019). However, according to Aliyyah (2021), conventional learning videos have several weaknesses, including conventional learning videos requiring the provision of material rather than the process of developing the material, production costs tend to be expensive, and require projection equipment to display the video.

Therefore, to attract students' attention from a graphic perspective, apart from conventional learning videos, animation-based learning videos could be an option. In line with the statement by Rosayana and Fitriyani (2021) which states that animated video media can be an option in the teaching and learning process because through animation-based videos, the available information can be conveyed clearly and helps students visualize the information received. The advantages of animated videos based on the results of research conducted by Apriyansyah (2020) show that animation-based learning videos can increase interest in learning and create a sense of enjoyment during the learning process and increase students' understanding of the material presented using animated videos.

The previous research that developed and produced an animation product that was suitable for use as a learning medium was research by Sabrinatami and Rinawati (2018) entitled development of stop motion animation video learning media for making cakes from rice flour in the Indonesian Cake subject at SMK N 4 Yogyakarta. Based on previous research, this research develops animated video-based learning media with the latest in the form of animated video learning media for pasta material. The aim of this research is to develop animated video learning media regarding pasta material in the Food Processing and Presentation subject, and to determine the feasibility of the results of animated pasta video products based on the assessment of validators consisting of material experts, language experts and media experts.

## 2. METHODS

This research is included in the type of research and development (Research and Development) with a 4D development model (Define, Design, Develop, and Disseminate) which has been modified, namely limiting the development procedure to the Develop stage only at the expert appraisal level or expert assessment of the designs and animated video products produced.

The define stage is the activity of analyzing the needs for developing learning media which includes problem analysis activities and learning component analysis activities. The problem analysis was obtained from the results of interviews with teachers of Food Processing and Presentation subjects. Analysis of learning components was obtained from the activity of analyzing KD 3.6, namely analyzing dishes from potatoes and pasta based on the independent curriculum at the Tourism Vocational School.

The design stage is the activity of designing an animated video by creating a storyboard that is guided by the Media Content Outline (GBIM). The storyboard structure consists of six columns which can be seen in the table below.

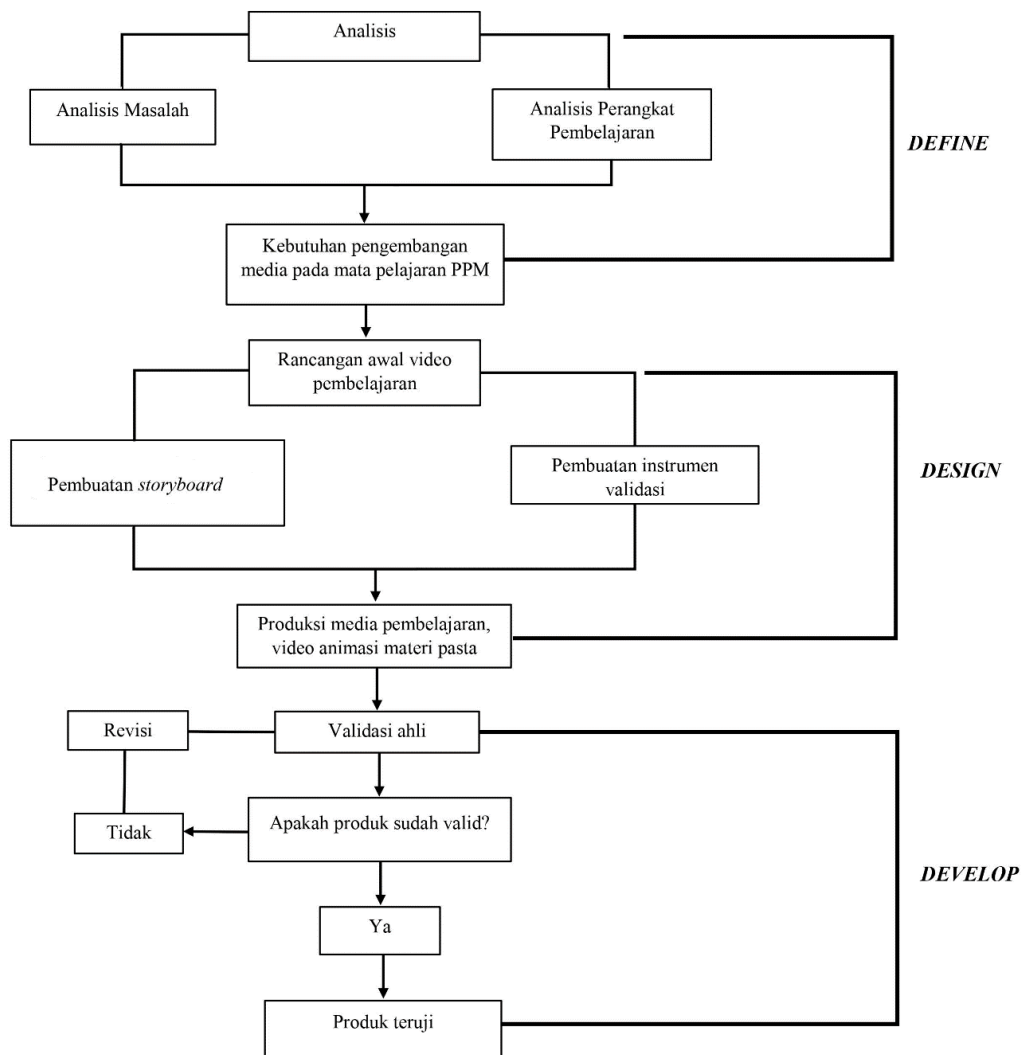
**Tabel 1.** Format Storyboard

No.	Description	Visual	Audio	Time	Information
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In column No. shown to give a number for each row filled in. The description column contains the number and description of the scene as well as an explanation of the scene. The visual column contains images and visual explanations that will be displayed. The audio column contains background audio and narration that will be delivered. The time column contains the duration of each scene. The description column contains additional information that is not explained by the other five columns in the storyboard. At this stage the planning continues to the process of creating animated video media which consists of: three stages including pre-production, production and post-production.

The develop stage is the activity of assessing the feasibility of the design and product animation video with pasta material by experts. The assessment was carried out by three experts including material experts, language experts and media experts. The storyboard design that has been created is submitted to material experts and language experts to provide suggestions for input which are then developed into a design that is suitable for production. The pasta animation video product that has been created is submitted to media experts to assess its suitability and the suggestions given are used as a reference for developing pasta material animation video products that are ready to be used in the learning process.

Based on the description above, the development procedure diagram can be seen in the image below.



**Figure 1.** Procedure diagram for developing animation media on paste material.

Data collection was carried out and used in this research, including through interviews, literature studies and expert validation sheets. Interviews are used to analyze learning media development needs. Literature studies were carried out to gather information can be used for learning media that will be developed. The expert validation sheet is used to find out the assessments and suggestions given by material experts, language experts and media experts.

The data analysis technique in this research uses qualitative data analysis techniques. Data in the form of suggestions and comments are processed into meaningful sentences to obtain the necessary information.

### 3. RESULTS AND DISCUSSION

#### 3.1. Research Result

##### 3.1.1. Define

This define stage includes activities to analyze the needs for developing learning media which are obtained by analyzing problems and analyzing learning components. Problem analysis was obtained through interviews with teachers teaching the Food Processing and Serving subject at SMKN 2 Baleendah Bandung. Analysis of learning components includes analysis related to KD 3.6, namely analyzing potato and pasta dishes as well as indicators of student competency achievement which refer to the syllabus for the Food Processing

and Serving subject and lesson plans for pasta material. The results of the needs analysis show that it is necessary to develop learning media which was previously only via WhatsApp messages into animated videos in order to increase students' interest in pasta material from a visual and audio perspective.

### 3.1.2. Designing

The design stage consists of designing an animated video on pasta material, followed by making an animated video and preparing a validation sheet for material experts, linguists and media experts and creating animated video media on pasta material. The design of animated video media begins with creating a GBIM (Media Content Outline) which refers to the results of the analysis of previous learning components. GBIM is a guideline for preparing storyboards. The stages of making animated video media with pasta material consist of three stages including pre-production, production and post-production. Pre-production of animated videos includes activities to create character designs, create storyboards, record narration, and select background music. Video production is carried out by creating background layouts and animation processes using the Powtoon application and VN application. Post-production consists of the composting process or combining each scene that has been created, as well as the editing and sound design processes. Sound design is the addition of audio narration and background music to create a complete animation video with pasta material. The output from this post-production stage is an animated video of pasta material with a duration of 11 minutes.

### 3.1.3. Development

The develop stage in this research was carried out by means of expert appraisal. The expert appraisal process aims to determine the suitability of the pasta animation video product based on material, linguistic and media aspects. The suggestions obtained are used as a reference for developing animation media products.

### 3.1.4. Material validation results

The first validation is carried out by material experts on the storyboard design that has been created. The purpose of this validation is to see and assess whether the pasta material that will be delivered is completely included in the storyboard or not. Based on the validation results, it was concluded that the storyboard design needed improvement. Suggestions given by material experts include improvements to the indicators of "material density" and "image suitability" to the material. Next, stage two validation was carried out on the pasta animation video design. As a result of this validation, the material expert provided suggestions for improvements to the pasta image, namely that the pasta color should be made more contrasting. Based on the results of the second stage of validation, all pasta images were changed to pasta images with more contrasting colors. The revised pasta animation video design was then validated again by material experts.

**Table 2.** Feasibility of Animation Videos Based on Material Experts

Indicator	Category
Content suitability	Worthy
Collapse of matter	Worthy
Material coverage	Worthy
Concept compatibility	Worthy
Image suitability	Worthy

Dialogue/narrative suitability	Worthy
Ease of understanding	Worthy

The results of the third stage of validation by material experts were that all assessment indicators for the animated pasta video product were declared suitable for use in learning.

### 3.1.5. Language validation results

The aim of this language validation is to obtain an assessment based on the linguistic aspects of the pasta animation video design that is created. From the results of validation by language experts, it can be concluded that there are suggestions for improvement in the indicators "accuracy of terms" and "ability to encourage students' curiosity". Next, validation was carried out again to improve the pasta animation video design. The results of the second stage of validation, linguist experts suggest improvements should be added to the introductory questions to enter the paste material. Based on the results of the second stage of validation, the author changed the narrative text in scene 5. The pasta animation video design which had been improved was then validated again by a linguist.

**Table 3.** Feasibility of Animation Videos Based on Linguistic Experts

Indicator	Category
Language suitability	Worthy
Accuracy of terms	Worthy
Ease of understanding the flow of the material	Worthy
Ability to encourage curiosity	Worthy
Accuracy of rules	Worthy

The results of the third stage of validation by language experts were that all the assessment indicators for the animated pasta material video product were declared suitable for use in learning.

### 3.1.6. Media validation results

The learning media product handed over to media experts is in the form of animated video media with pasta material which has been created based on the results of the completed validation process with material experts and media experts. There are two aspects of assessment, namely the presentation aspect and the audio-visual aspect which are assessed by media experts. The results of validation by media experts can be concluded that in general it is good, but there are still several notes that need to be improved, especially for the motion cinematic aspect. Apart from that, the appearance of the "mascot" which was initially shown, as the video progresses, its existence seems to be "forgotten". Based on the validation results, the animated video product is improved according to the suggestions given. The animated video product with pasta material was then validated again by media experts.

**Table 4.** Feasibility of Animation Videos Based on Media Experts

Indicator	Category
Sequence of presentation	Worthy
Simple and charming	Worthy
Presentation of characters and visualization of materials and tools	Worthy

Audio (narration, sound effects, background)	Worthy
Visual (design layout, typography, color, animation)	Worthy

The results of the second stage of validation by media experts were that all assessment indicators for animated pasta video products were declared suitable for use in learning.

### 3.2. Discussion

Pasta material animation video media is a learning media that is shown as a tool for teachers to convey learning material to students. This research develops learning media which was previously via the WhatsApp application using conventional learning media into animated videos that can be used by students independently. This research is Research and Development (R&D) with a development procedure consisting of define stage (defining), design stage (designing), and develop stage (development).

The define stage is the stage of analyzing development needs which can be done by analyzing problems and analyzing learning components. The design stage consists of animation video design activities, followed by making animation videos for pasta material and making validation sheets for material experts, language experts and media experts. The resulting product is an animated video of pasta material with a duration of 11 minutes. At the develop stage, a validation process was carried out by material experts, language experts and media experts with the assessment results stating that it was suitable for use as a learning medium.

The use of animated videos about pasta as a learning medium for Food Processing and Presentation subjects has the advantage of an attractive animated visual display that can create students' interest in learning. Another advantage of course is that it can help teachers to deliver learning material. In line with what [Ismail \(2017\)](#) said, animated videos can help students understand learning material from teachers with the help of text, graphics and animated movements which can increase student interest and make the learning process more interesting. [Handaru \(2020\)](#) explains that the characteristics of adolescents entering the operational development stage are ages 11/12 to 18 years where students begin to be able to have scientific thinking models with hypothetical-deductive and inductive types, meaning that students begin to be able to draw conclusions, interpret, develop hypotheses and reason scientifically. Therefore, by using animated videos of pasta material as a learning medium, students can create intrapersonal communication in accordance with the characteristics of vocational school students' thinking development, who are on average in the age range of 15 - 18 years. Efficient use of animated pasta material videos so they can be used at any time. In accordance with [Kusuma's \(2021\)](#) research results, students can use animation-based videos without being limited by space and time. The drawback of the animated pasta material video product produced is that the video duration is too long. Based on the advantages and disadvantages of animated pasta video products, it is hoped that there will be improvements and further research that applies animated pasta videos to the learning process.

### 4. CONCLUSION

Based on the results and previous discussion, it can be concluded that the animated video media for pasta material in the Food Processing and Presentation subject was developed through three stages including the define, design and develop stages. The results of the validation of the pasta material animation video based on the expert

appraisal process by material experts, language experts and media experts were declared suitable for use as learning media.

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