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# Development of Composed *Dolanan* Song for Sixth Grade Learning Media on Javanese Script Writing

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## Article Information:

Received 04 23, 2024

Revised 04 29, 2024

Accepted 05 05, 2025

**Keywords:** Composed Song; *Dolanan* Learning Media; Javanese Script Writing

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## Abstract

The purpose of carrying out this research and development (R&D) is to produce composed song learning media products through *Dolanan* song and audio-visual based that have been tested for feasibility, so that they are effective in improving the learning outcomes of sixth grade students on the material of writing Javanese script's pair (*aksara Jawa pasangan*) that researched at Pesantren State Elementary School, Mijen, Semarang City. Using research and development models from Borg and Gall covering potential and problem stages, data collection, product design, design validation, design revision, product testing, product revision, usage testing, product revision, and mass production. The instruments are questionnaires for teacher and student needs; media and material expert validation questionnaire; questionnaire of teacher and student responses; and pretest-posttest questions. The media due diligence uses the percentage of eligibility criteria obtained from the results of expert validators, teacher responses, and student responses. The media effectiveness test is using the criteria of increasing the average value based on the N-Gain formula obtained from the pretest and posttest values. The result is that this product is very feasible for use in usage trials with a percentage of 94.68% of media expert validators; 93.05% of material experts; 94.4% of teachers' responses; and 95.9% of student responses. The N-Gain test result is 0.55; So that the product has been effective in improving student learning outcomes with moderate improvement criteria.

**How to cite:** Astuti, D., & Setiawan, D. (2025). Audio-visual Development : Composed Song Through *Dolanan* Song to Improve Learning Outcomes of Writing *Aksara Jawa Pasangan*. *JETL (Journal of Education, Teaching and Learning)*, 10(1). doi:<http://dx.doi.org/10.26737/jetl.v10i1.5502>

## INTRODUCTION

The Content Standard in the 2013 Curriculum on Javanese Local Content Subjects *SD/SDLB/MI* for the sixth grade contains that the learning material for Javanese script (*aksara Jawa*) for the first semester is KD 4.4, which is writing sentences in Javanese script *Kinanthi* song using the pair of Javanese script (*aksara Jawa pasangan*). Therefore, during the first semester, students are required to have the skills to read and write sentences in Javanese script using the pair. However, the fact is

that sixth grade students at Pesantren Elementary School still find it difficult to master the material as evidenced by the average score of students' daily test results on writing words or sentences using Javanese script pairs that have been carried out in semester 1 is 60.4. While the Minimum Completeness Score for Javanese subjects is 70. There are several fact obstacles experienced by teachers and students during the learning process that cause students to be less able to understand this material. The first is that only some of the students have learning resources in the form of *Pepak Bahasa Jawa*, so teachers find it difficult to understand students with appropriate material in *Pepak Bahasa Jawa* learning resources. The second obstacle is that there are no teaching aids available as learning media to learn this material, so there is no support so that students feel close to this material.

According to Ausubel, the meaningful learning process is a learning process where the teacher must connect the material learned with the condition of students, both in terms of knowledge that has been possessed by students, activities in the daily environment, cognitive development, and student likes or needs. So, it can be a fun learning if applied in learning to write *aksara Jawa pasangan* (Arinasari, 2022, p. 184). Students need learning media to channel this material to be more meaningful, not just memorized, and easy to remember. Aminah and Masniladevi stated that it is necessary for teachers to innovate in the use of learning media in order to be able to provide meaningful experiences and encourage student participation (Wiranda & Masniladevi, 2020, p. 3046).

Arsyad (2020, p. 101) discusses that media development can be in the form of visual-based media, audio-visual, computer, computer-based multimedia and interactive video, Microsoft Power Point, and the Internet. The use of audio-visual based media with a combination type of slide (film frame) and sound can be used because according to Nomleni and Manu, this media displays videos consisting of images and accompanied by sound that can stimulate the senses of hearing and sight, so it is high in attractiveness (Soedarnadi & Sulisworo, 2022, p. 268). In addition, Yudhi Munadi mentioned that audio-visual media can be used repeatedly to improve understanding and can overcome time and distance limitations, considering the duration of the Javanese language learning process is only two hours of lessons a week (Pradilasari et al., 2019, p. 10). Utilizing songs in the learning process is one way for teachers to stimulate the mind, so that the accompaniment causes students to become more concentrated (Hidajati & Ariska, 2022, p. 75).

A composition is a song arrangement that is filled in accordance with the author's soul which means that composing a song is filling in the melodic arrangement of the song using song lyrics that are in accordance with learning needs, so that a song composition is formed that contains learning material (Pakaya & Utina, 2022, p. 105). Composed song is a song that comes from the activity of imitating or imitating melodies from other songs into songs that have different lyrics (Suyadi, 2015, p. 201). Song lyrics are one of the learning media that can be used for the delivery of values or feelings that are familiar or already known and as a means of preservation and socialization of attitudes or values (Sumarni & Ali, 2020, p. 135). The delivery of values in song lyrics for this is to use *aksara Jawa pasangan* materials that will be socialized to students. Song melodies that can be used are culture-based song melodies because they are in accordance with the material which is part of Javanese culture as well as a means of socializing the preservation of Javanese cultural values.

According to Diane Papalia, the cultural packaging that will be used for learning media should be based on the experience, age, and background of children first (Maryatun et al., 2017, p. 1). Based

on the age of the child, Grade VI elementary school students are included in the age of children. So, choosing a song melody as an application of song composition can use *Dolanan* song from Javanese culture. *Dolanan* song in Javanese culture is one of the means of socialization and communication for children with their environment and a way to influence someone in carrying out an action (Retnoningsih, 2019, p. 62). Through *Dolanan* song, children can sing and play as well as learn through socializing with peers, physical movements, having fun, and having fun. So, teachers can use *Dolanan* song as a medium in the meaningful learning process because students can learn to adjust their age and environment.

The Internet is able to provide learning spaces, both virtual and real, online and offline, and provide a variety of services in the field of education for teachers and students (Xie, 2023, p. 3). The development of communication technology such as the existence of mobile phones and laptops available on the internet will facilitate communication, both visually and audio-visually through very fast message access (Maysarah et al., 2020, p. 4). From communication applications on the internet, you can use the Youtube application as a tool to facilitate communication of learning media. Currently, YouTube is one of the well-known social media in the community that provides a lot of learning content to its users, can be accessed virtually for free, and can be used as a very useful technological resource for the field of Education (Colás-Bravo & Quintero-Rodríguez, 2023, p. 1). Based on the facts in the initial observation questionnaire for sixth grade students of Pesantren Elementary School, out of 30 students, there are 26 students who already have personal mobile phones and are equipped with Online Internet applications. With the condition of students in terms of daily activity is to have a personal mobile phone and equipped with internet facilities, it can be used as an aid in communicating audio-visual learning media for anywhere and anytime. From the supporting theories and the state of the learning process in sixth grade of Pesantren Elementary School, the purpose of carrying out this research and development is to produce composed song learning media products through *dolanan* song and audio-visual based that have been tested for feasibility, so that they are effective in improving the learning outcomes of sixth grade students on the material of writing *aksara Jawa pasangan*.

## METHODS

Using a research and development (R&D) methods and based on model according to Borg and Gall that has been modified by Sugiyono (2018, p. 409), so it consists of ten steps, namely potential and problem, data collection, product design, design validation, design revision, product testing, product revision, usage testing, product revision, and mass production. From one population in sixth grade of Pesantren Elementary School in Mijen, Semarang, consisting of 29 samples.

It will be taken using purposive sampling techniques for the product testing stage that the sample was selected based on the relevant level of student experience to represent all students, but was only selected on a small scale, namely three students with the upper rank, three students with the middle rank, and three students with the lower rank (Nyimbili & Nyimbili, 2024, p. 98). Then, simple random sampling techniques for the usage testing stage that the sample is a randomly selected representative, that is, the entire student in (Noor et al., 2022, p. 81).

The non-test data collection, using questionnaire instruments for teacher and student needs that given on the data collection stage; media and material expert validation questionnaire that given on the product design stage; and questionnaires of teacher and student responses that given on the

product testing stage. For test data collection, use pretest and posttest questions that given on the usage testing stage.

Testing the validity of pretest and posttest questions using the Pearson product moment formula with the help of Microsoft Office Excel. The question item is valid if R result > R table with a significance level of 0.05. Testing the reliability of the pretest and posttest question instruments is using the KR-20 formula with the help of Microsoft Office Excel based on the reference to the question reliability criteria in Table 1 (Astuti et al., 2023, pp. 4–5).

TABLE 1. The Reliability Criteria of Question Test

Koefisien of KR-20	Reliability Criteria
$0,90 \leq KR-20 < 1,00$	Very reliable
$0,70 \leq KR-20 < 0,90$	Reliable
$0,40 \leq KR-20 < 0,70$	Reliable enough
$0,20 \leq KR-20 < 0,40$	Unreliable
$KR-20 < 20$	Very unreliable

Feasibility tests to assess research product design are carried out by media and material expert validators. Feasibility tests so that the product can be used for testing use in larger classes are carried out by teachers and students through response questionnaires in small-scale classes. The results of media and material validation as well as teacher responses are using a Likert scale with a score of 1 to 4. A score of 4 for answers is very good, a score of 3 is good, a score of 2 is not good, and a score of 1 is very ungood (Sugiyono, 2018, p. 135). The percentage of feasibility data (P) is generated from the result score (f) divided by the maximum score (N), then multiplied by 100% (Danar et al., 2022, p. 75). The feasibility percentage results are interpreted into feasibility criteria that can be observed in Table 2 (Rahayuningsih & Setiawan, 2023, p. 5866).

TABLE 2. The Feasibility Criteria of Product Design

Presentage	Feasibility Criteria
86% - 100%	Very feasible
76% - 85%	Feasible
60% to 75%	Feasible enough
55% to 59%	Less feasible
0% - 54%	Unfeasible

The before-after experimental design is used to test the effectiveness of the product at the testing usage stage. The learning outcome before learning using media products by researchers (pretest results) compared to learning outcomes after learning using media products by researchers (posttest results) (Sugiyono, 2018, p. 415). The average improvement of the result is tested using the N-Gain formula whose results can be categorized into certain criteria (Tarigan & Setiawan, 2023, p. 2495). The N-Gain test is the average of the posttest values that reduced by the average of the pretest values. So, that result is divided by the maximum value that reduced by the average of the pretest values. The improvement criteria can be observed in Table 3 (Dewi et al., 2022, pp. 375–376).

TABLE 3. The Average Improvement Criteria of Test Result

N-Gain	Average Improvement Criteria
$N-Gain < 0,3$	Low improvement
$0.3 \leq N-Gain < 0,7$	Moderate improvement
$N-Gain \geq 0,7$	High improvement

## RESULT AND DISCUSSION

Potential and problem analysis is carried out with three treatments, namely curriculum analysis, material analysis, and needs analysis (Usmaedi et al., 2020, p. 494). In curriculum analysis, the subject of research refers to the 2013 curriculum guidelines for local content subjects in Javanese sixth grade by formulating learning objectives and indicators based on basic competence 4.3, namely reading and writing Javanese text one paragraph, so that a learning implementation plan can be designed. For material analysis, teachers and students use material from the *Remen Bahasa Jawa* book for Sixth Grade as a learning resource. In the needs analysis, researchers distributed teacher and student needs questionnaires that contained profiles digging information and media profiles. In the profile of digging information, it produces several potentials and problems related to classroom learning, namely most students have difficulty in reading and writing *aksara Jawa pasangan*, lack of media innovation to support the learning process because they only use student books and *Pepak Bahasa Jawa* book, the availability of internet networks and LCD Projectors in the classroom, and most of the students already have personal mobile phones. From these potentials and problems, media can be developed that will be studied, namely song composition through audio-visual-based *Dolanan* song with the help of the Youtube application. In the media profile, produce data that can support the design of product designs according to the needs of teachers and students, so that they can be used in the next stage, namely the data collection stage.

The data collection stage aims to determine supporting materials for research activities, namely determining materials and determining system needs to support product design (Latifah et al., 2022, p. 517). The book of Javanese *Remen Bahasa Jawa* for sixth grade is used as a source to determine the material, namely the function of the *aksara Jawa pasangan*; how to read and write words that use *aksara Jawa pasangan*; how to write *aksara Jawa pasangan* of *Ka, Ta, and La* when obtaining *Suku* and *Cakra* ; how to write the *Na aksara* when acquiring the *pasangan* of *Ca* and *Ja*; and how to write words that end with consonants, but obtain affixes that begin with vowels using the *aksara Jawa pasangan*. To determine system needs, refer to the results of the needs analysis questionnaire published in the media profile. From the questionnaire of teacher and student needs, the melody of the song entitled *Padhang Bulan* was chosen to be used as a song composition, so that the lyrics will be filled with predetermined material. The audio-visual media editing process uses CapCut video editing software, which is able to merge, cut, and adjust video compositions, and is able to add audio or music (Yulius & Sartika, 2022, p. 102). To determine the needs of the audio system, it consists of audio music, accompaniment to song composition, and audio explanatory effects of the appearance of each object in the video. Researchers have obtained permission from one of the YouTube channel owners to use his music composition as an audio accompaniment to *Padhang Bulan* song composition in product design, namely *Karaoke Pak Mul Musik* with his musical instrument entitled *Karaoke Padhang Mbulan*. Audio explanatory effects of the appearance of each object take advantage of the features of CapCut video editing software. The need for a video system from the results of the needs questionnaire interprets that teachers and students need video media with a system consisting of a video position is Landscape, the size of one full screen, the font Comic Sans Ms, the color of the video is shades of black, and the duration of the video is less than five minutes.

Product design can be done with the planning and development steps of product design (Yanti & Fatisa, 2022, pp. 405–406). Product design planning is carried out by making storyboards, which

are visual images of audio-visual based media to be created, so as to facilitate researchers in developing product designs. Storyboards are organized into tables that contain display, audio, and explanation columns.

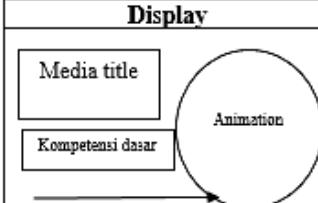
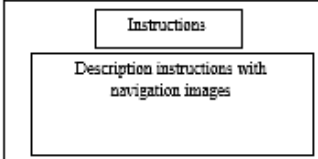
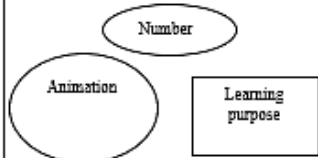
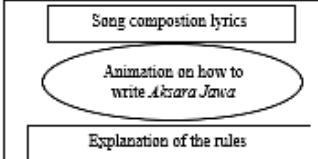
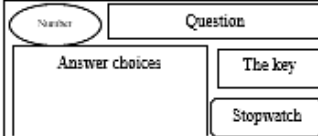
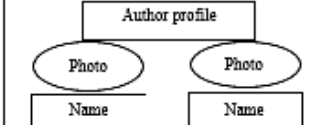
Display	Audio	Explanation
	Intro of audio music accompaniment to <i>Padhang Bulan</i> song instruments by <i>Karaoke Pak Mul Musik</i> and audio effects of object appearance.	The initial display of the video consists of the title of media design development and basic learning competencies.
	Intro of audio music accompaniment to <i>Padhang Bulan</i> song instruments by <i>Karaoke Pak Mul Musik</i> and audio effects of object appearance.	A list of instructions for using the video that explains how to use the media.
	Audio music accompaniment to <i>Padhang Bulan</i> song instruments by <i>Karaoke Pak Mul Musik</i> and audio effects of object appearance.	The separator of the part of each learning objective consists of animated images and learning objectives.
	Audio music accompaniment to <i>Padhang Bulan</i> song instruments by <i>Karaoke Pak Mul Musik</i> and audio effects of object appearance.	The display of song composition material consists of song composition lyrics, animation of how to write <i>Aksara Jawa</i> correctly, and rules that must be considered.
	Audio music accompaniment to <i>Padhang Bulan</i> song instruments by <i>Karaoke Pak Mul Musik</i> and audio effects of object appearance.	The evaluation consists of question numbers, questions, answer choices, work stopwatch, and answer key.
	Audio music accompaniment to <i>Padhang Bulan</i> song instruments by <i>Karaoke Pak Mul Musik</i> and audio effects of object appearance.	The closing view consists of a bibliography and a profile of the composer with the name accompanied by a photo of the composer.

Fig. 1 Storyboard

The third stage is product design development that carried out according to the storyboard. The development of *aksara Jawa pasangan* design is using Microsoft Word 2016 software. Image design development using Canva and Snapseed software. All design components that have been developed, then developed into one media product design using CapCut video editing software. Media product design can be operated through mobile devices or computers. The initial display of the video serves to attract students' attention with moving animations and media titles that use language with the nature of arousing students' enthusiasm to learn this material. This section contains information on media titles and basic learning competencies. The initial view can be observed in Figure 2.



Fig. 2 Initial display

The list of instructions serves to make it easier for users to operate the development of this media design. Contains information on how to learn this material by utilizing the Youtube application video navigation icon and the Wordwall application application icon to continue learning evaluation. The list of instructions can be observed in Figure 3.

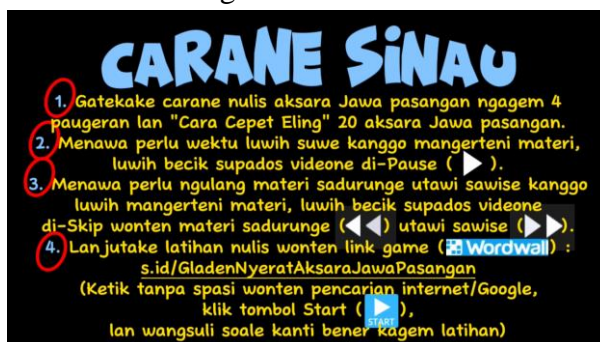


Fig. 1 The list of instruction

The section separator on each learning objective serves to direct users in learning according to the learning objectives. Learning objectives are modified into simple language that can be understood by students and contains words that are inviting. There are two indicators used to compile learning objectives in this media, namely remembering the rules for writing twenty *aksara Jawa pasangan* correctly and writing Latin written words into *aksara Jawa pasangan* correctly. The part separator of each learning objective can be observed in Figure 4.



Fig. 4 Learning objective separator

The display of song composition material serves to explain this material in accordance with learning objectives. This section contains a composition of songs whose lyrics contain this material with the melody of songs from *Padhang Bulan* song. In addition, there are several *paugeran* that contain rules in this material, namely the function and how to write *aksara Jawa pasangan*, *paugeran 1*, *paugeran 2*, and *paugeran 3*. There is an animation of the materials that can lead

students to understand more in real or concrete. The display of the material can be observed in Figure 5.



Fig. 5 Display of song composition material

Evaluasi serves to provide opportunities for students to practice solving problems in this material through words that exist in everyday life. This section contains the questions, answer choices, question numbers, stopwatches, and answer keys. The answer key contains a brief discussion that can clarify students about how to solve the problem by utilizing the media composed by this song. After completing the evaluation, there is a video section that directs students to do the questions in the Wordwall application for further practice. The evaluation section can be observed in Figure 6.

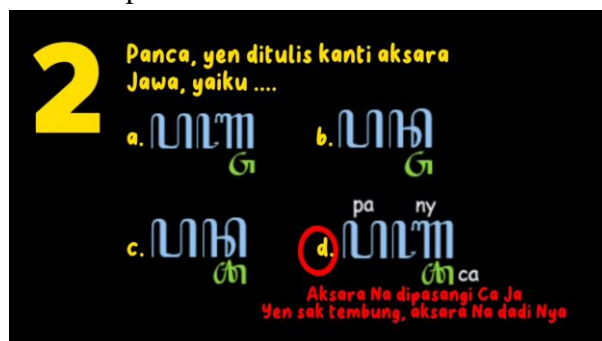


Fig. 6 Evaluation

The closing display serves to provide information to users that this audio-visual-based song composition media is compiled based on references and suggestions from expert validators. This section contains a bibliography, sources of musical instrument compositions, and compiler profiles. The closing view can be observed in Figure 7.



Fig. 7 Closing

After the product is designed with the MP4 file format, a design validation stage is carried out which aims to determine the feasibility criteria for media product design to be used in the product trial stage obtained from the data from the validation questionnaire of media experts and material

experts, so that media deficiencies that need to be corrected can be found. In order for the preparation of media to achieve the expected learning objectives, the media is arranged in a flexible, clear, and simple plan. The plan is at least contains learning objectives, learning activities, and learning assessments. The way to achieve learning objectives is through quality learning design and implemented by taking into account the characteristics of students (Menteri Pendidikan Kebudayaan Riset dan Teknologi Republik Indonesia, 2022, pp. 4–7). One of the criteria for selecting learning media that needs to be considered is the technical quality of the media (Azhar Arsyad, 2020, p. 76).

TABLE 4. Media Expert Validation Result

Indicators	Number	(f)	(N)	(P)	Feasibility Criteria
Media preparation	1, 2, 3	12	12	100%	Very feasible
Ease of Use	4, 5, 6	12	12	100%	Very feasible
Media content	7, 8, 9	11	12	91,67%	Very feasible
Providing quality learning experiences	10, 11	7	8	87,5%	Very feasible
Compliance with student characteristics	12, 13	8	8	100%	Very feasible
Technical quality	14, 15, 16, 17, 18, 19, 20, 21, 22	32	36	88,89%	Very feasible
<b>Average</b>				<b>94,68%</b>	<b>Very feasible</b>

The results of media expert validation can be observed in Table 4 which interprets that the media is very feasible with a percentage of 94.68%. For the validity of material experts in Table 5, it yields a percentage of 93.05% which means that the material in this media design is very feasible. From the validation of the two experts, the media design was declared very feasible to be tested in the field with revisions to be carried out in the future.

TABLE 5. Material Expert Validation Result

Indicators	Number	(f)	(N)	(P)	Feasibility Criteria
Flexibility	1	4	4	100%	Very feasible
Clarity	2	3	4	75%	Feasible enough
Simplicity	3	4	4	100%	Very feasible
Compliance with indicators	4	4	4	100%	Very feasible
Material coverage	5	4	4	100%	Very feasible
Material demands	6	3	4	75%	Feasible enough
Application of real context	7	4	4	100%	Very feasible
Adjustment of student characteristics	8, 9	8	8	100%	Very feasible
Language use	10, 11	7	8	87,5%	Very feasible
<b>Average</b>				<b>93,05%</b>	<b>Very feasible</b>

The fifth stage is design revision. Improvement suggestions that have been expressed by experts during the design validation stage are as a reference. Media validators suggest adding material annotation animations. Material expert validators suggest improving the language so that the type of language used is consistent. If the media use *Jawa Ngoko* language, the media must use *Jawa Ngoko* language for all parts of the media.

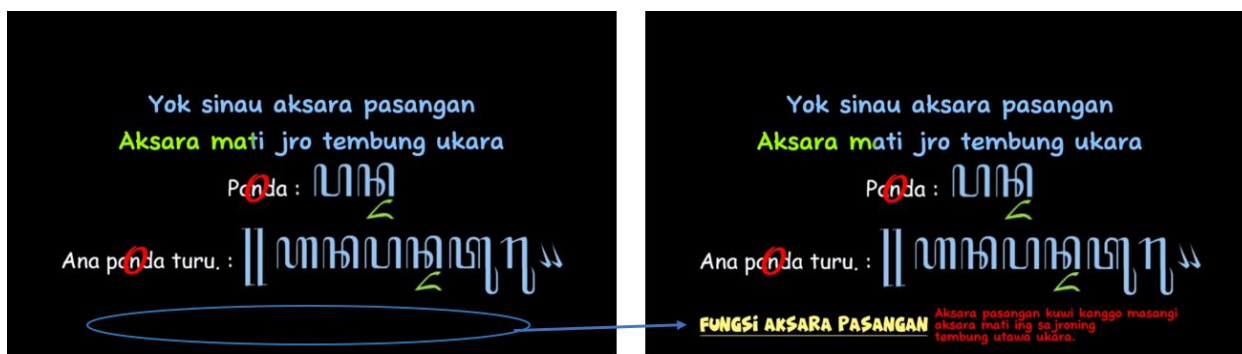


Fig. 8 Design revision suggestion from media validator

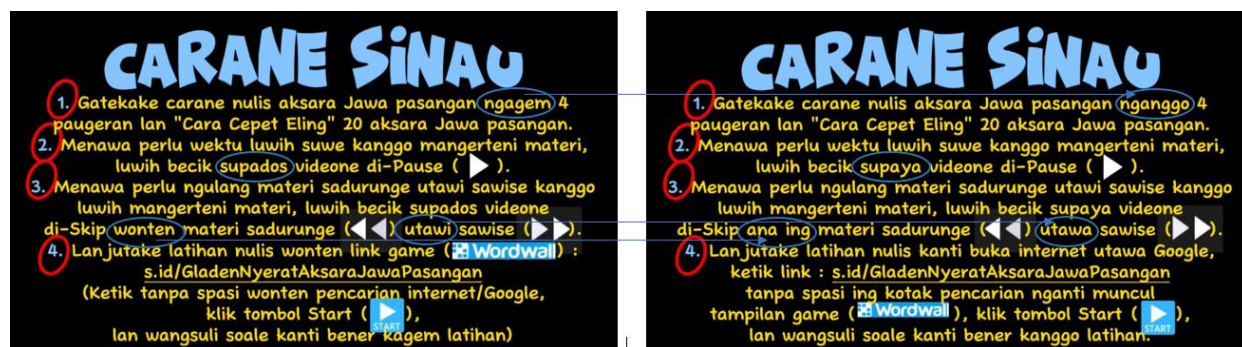


Fig. 9 Design revision suggestion from material validator

The sixth stage is a product testing that conducted on a sample of nine students with top, middle, and lower ranking criteria. Learning simulations are carried out using learning media that have been designed by researchers. Then, provide questionnaires of responses to teachers and students to find out the eligibility criteria for the product to be carried out in the trial stage on a larger scale. In student responses, use questionnaires with the Guttman scale to find out students' answers between "Yes" which means a score value of 1 or "No" which means a score value of 0 (Rajagukguk et al., 2022, p. 157).

TABLE 6. Results of The Teacher Response

Indicators	Number	(f)	(N)	(P)	Feasibility Criteria
Compliance with basic competencies	1	4	4	100%	Very feasible
Clarity of instructions, materials, illustrations, and the flow	2, 7, 10	12	12	100%	Very feasible
Suitability of the material to reference books and previous student abilities	3, 6	8	8	100%	Very feasible
Attractiveness of student participation	4	4	4	100%	Very feasible
Optimization of the use of school facilities	5	3	4	75%	Feasible enough
Ease of operation	8	3	4	75%	Feasible enough
Repetitive use capability	9	4	4	100%	Very feasible
Technical quality	11	4	4	100%	Very feasible
Language use	12	4	4	100%	Very feasible
<b>Average</b>				<b>94,4%</b>	<b>Very feasible</b>

TABLE 7. Results of The Students Response

Indicators	Number	(f)	(N)	(P)	Feasibility Criteria
Compliance with basic competencies	1	9	9	100%	Very feasible
Clarity of instructions, materials, illustrations, and the flow	2, 7, 10	23	27	85,2%	Feasible
Suitability of the material to reference books and previous student abilities	3, 6	16	18	88,9%	Very feasible
Attractiveness of student participation	4	9	9	100%	Very feasible
Optimization of the use of school facilities	5	9	9	100%	Very feasible
Ease of operation	8	9	9	100%	Very feasible
Repetitive use capability	9	9	9	100%	Very feasible
Technical quality	11	9	9	100%	Very feasible
Language use	12	8	9	88,9%	Very feasible
<b>Average</b>				<b>95,9%</b>	<b>Very feasible</b>

From the responses of teachers and students, it can be interpreted that the media is very feasible to be used in the trial phase of use on a larger scale with the results of 94.4% of teachers and 95.9% of students. The seventh stage is product revision. From the questionnaire of teacher and student responses, the dominant weakness appears in the category of clarity of instructions, materials, illustrations, and flows in media products, so that researchers will carry out the treatment of learning media at the trial stage by highlighting these categories in order to overcome the weaknesses of the product.

Before testing effectiveness, it is necessary to test the validity and reliability of the pretest and posttest question instruments. Of the 25 questions, there are twenty valid questions that can be observed in Table 8. The coefficient result of KR-20 is 0.71687, so this question instrument has reliable criteria that can be observed in Table 9.

TABLE 8. Validity of Pretest and Posttest Questions Instruments

Number Question	R Table	R Result	Validity Criteria (R Result > R Table)
1	0,4132	0,78002	Valid
2	0,4132	0,78002	Valid
3	0,4132	0,65203	Valid
4	0,4132	0,00977	Unvalid
5	0,4132	0,44135	Valid
6	0,4132	0,54713	Valid
7	0,4132	0,51105	Valid
8	0,4132	0,49828	Valid
9	0,4132	0,77161	Valid
10	0,4132	0,52535	Valid
11	0,4132	-0,0269	Unvalid
12	0,4132	0,59598	Valid
13	0,4132	0,78002	Valid
14	0,4132	0,78002	Valid
15	0,4132	0,51105	Valid

16	0,4132	-0,0269	Invalid
17	0,4132	0,00977	Invalid
18	0,4132	0,51105	Valid
19	0,4132	0,04035	Invalid
20	0,4132	0,51105	Valid
21	0,4132	0,51105	Valid
22	0,4132	0,78002	Valid
23	0,4132	0,78002	Valid
24	0,4132	0,77161	Valid
25	0,4132	0,93784	Valid

TABLE 9. Reliability of Pretest and Posttest Questions

Results of the KR-20 Coefficient	Reliability Criteria
0,71687	Reliable

The eighth stage is the usage testing stage on a sample of 29 students in one population using a before-after experimental design that aims to determine the effectiveness of media products on a larger sample, then the product can be effectively used in the learning process. The N-Gain test result is 0.55 which means there is an increase between the pretest and posttest values. Thus, this song composition media product through *Dolanan* song and audio-visual based songs is effective in improving student learning outcomes on *aksara Jawa pasangan* writing materials with moderate improvement criteria.

TABLE 10. N-Gain Test Result

Students	Pretest Average Score	Posttest Average Score	Maximum Value	N-Gain	Improvement Criteria
29	63,8	83,6	100	0,55	Moderate

The ninth stage is product revision, which is to correct weaknesses in this media that are detected after testing use, especially in the audio volume that needs to be elevated so that when connected to a speaker, this media can be heard by students better. Fixing audio media is using the Volume feature in CapCut software. After being declared feasible and effective in the learning process, the product can enter the last stage, namely mass production. The media composed of songs through *Dolanan* song and audio-visual lines is mass produced by uploading it on YouTube social media, namely on the Dwi Astuti channel which can be accessed via a link <https://youtu.be/6QKWiaxLFjI>. This product is published through YouTube's learning media communication tool, so that it can be accessed by teachers, students, and the general public (Farida et al., 2022, pp. 62–63). In fact, the use of this media technology can be accessed at home for individual student learning, so as to significantly improve learning outcomes on this material (Almagro & Edig, 2024, p. 2). Mass production of media can be observed in Figure 10.

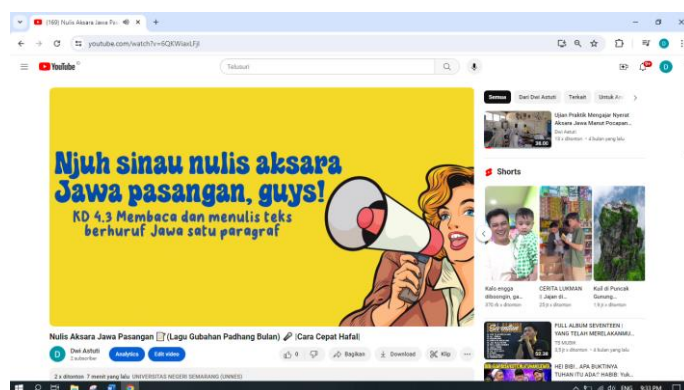


Fig. 10 View of mass production media on YouTube

The use of songwriting media in learning can be said to be effective, in accordance with research by Fajriyah (2018, p. 50). This is evidenced by changes in attitudes, behavior, and level of understanding of students between before and after this media treatment. In research by Wahyuningrum and Binsa (2023, p. 15), the application of learning through songs is appropriate to be done in memorizing Javanese material. This research results that learning through songs can improve skills, teach manners, train learning focus, and improve memorization. *Padhang Bulan Dolanan* song contains the character value of integrity, namely students can be enthusiastic in participating in learning (Novitasari et al., 2022, p. 4531). Thus, the melody of the *Padhang Bulan Dolanan* song can be used for song composition in media that has been developed by researchers to increase students' enthusiasm in learning to write *aksara Jawa Pasangan*. The use of audio-visual based learning media can increase students' understanding of *aksara Jawa* material, in accordance with research that produces significant differences between scores before and after audio-visual based media treatment (Tanuwijaya et al., 2023, p. 2192). In addition to these researches, there are results that the use of audio-visual based *Pandai Aksara Jawa* learning media is very feasible and practical to be used in learning *Sandhangan Swara* in *aksara Jawa* (Wulandari et al., 2023, p. 308). Thus, the use of audio-visual media that can increase enthusiasm, worthiness, and practicality for learning can support this research and development.

## CONCLUSIONS

Broadly speaking, the development of song composition media through Dolanan song and audio-visual based consists of the initial display, list of instructions, learning objectives separator, display of song composition material, evaluation, and closing display. The percentage of due diligence results by validators of media experts and material experts respectively is 94.68% and 93.05%. From the responses of teachers and students, the eligibility percentage was 94.4% and 95.9%. Thus, the product has very feasible criteria for use in usage trials. The N-Gain test result after the usage test was 0.55. Thus, the product has been effective in improving student learning outcomes in writing *aksara Jawa pasangan* with moderate improvement criteria.

## ACKNOWLEDGMENT

The authors would like to thank the media experts and material experts that the authors have mentioned in the closing section in the learning media results. They have provided validation responses and guided the revision process of the research product. In addition, we would like to thank all parties from SDN Pesantren, Mijen, Semarang, Indonesia, who have given permission to

carry out the research for population and sample collection, and have provided very valuable responses for this research product.

## CONFLICTS OF INTEREST STATEMENT

There was no conflict in the process of compiling this manuscript. The authors worked well together in the pre-research, research implementation, and manuscript preparation stages. This manuscript is purely the result of the authors' compilation and there was no fraud with other parties that resulted in inappropriate actions..

## AUTHOR CONTRIBUTIONS

Dwi Astuti contributed to the process of identifying problems that occurred in the target sample, thus giving rise to product development ideas to overcome the problems that occurred. In addition, she contributed to carrying out all stages of research and compiling this manuscript. Deni Setiawan was the executor for the product revision process, before mass production of this research product was carried out and also contributed to the entire revision process of all stages of research and compiling this manuscript.

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