



Development of Website-Based Learning Media for Listening Skills for Puppet Story Materials at the Junior High School Level

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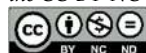
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Abstract: This study aims to design, develop, and evaluate website-based Javanese language learning media that are designed innovatively, interactively, and easily accessible to students and teachers. Another objective is to ensure that this learning media is in accordance with user needs and supports an effective learning process. The type of research used is research and development (R&D) based on the theory put forward by Sugiono, which includes systematic steps in designing and testing learning products. Data collection was carried out through questionnaires distributed to students and teachers to identify their needs, where the results were analyzed using qualitative and quantitative descriptive approaches. Product validation was carried out by several parties, including students as the primary users, media validators to assess the quality of design and interactivity, and material validators to assess the accuracy of learning content. Based on the validation results, media experts and material experts assessed this product as "very feasible" to use in learning. In addition, the results of the trial conducted on students provided positive feedback by stating that this learning media was also "very feasible". Thus, this website-based learning media is useful for improving students' listening skills, especially in the wayang story material in Javanese language subjects.

Abstrak: Penelitian ini bertujuan untuk merancang, mengembangkan, dan mengevaluasi media pembelajaran bahasa Jawa berbasis website yang dirancang secara inovatif, interaktif, dan mudah diakses oleh siswa maupun guru. Tujuan lainnya adalah untuk memastikan bahwa media pembelajaran ini sesuai dengan kebutuhan pengguna serta mendukung proses pembelajaran. Jenis penelitian yang digunakan adalah penelitian pengembangan (R&D) berdasarkan teori yang dikemukakan oleh Sugiono, yang mencakup langkah-langkah sistematis dalam merancang dan menguji produk pembelajaran. Pengumpulan data dilakukan melalui angket yang disebarakan kepada siswa dan guru untuk mengidentifikasi kebutuhan mereka, di mana hasilnya dianalisis menggunakan pendekatan deskriptif kualitatif serta kuantitatif. Validasi produk dilakukan oleh beberapa pihak, termasuk siswa sebagai pengguna utama, validator media untuk menilai kualitas desain dan interaktivitas, serta validator materi untuk menilai keakuratan isi pembelajaran. Berdasarkan hasil validasi, ahli media dan ahli materi memberikan penilaian bahwa produk ini "sangat layak" digunakan dalam pembelajaran. Selain itu, hasil uji coba yang dilakukan terhadap siswa memberikan umpan balik positif dengan menyatakan media pembelajaran ini juga "sangat layak". Dengan demikian, dapat disimpulkan bahwa media pembelajaran berbasis website ini bermanfaat untuk meningkatkan keterampilan menyimak siswa, khususnya dalam materi cerita wayang dalam mata pelajaran bahasa Jawa.

A. Introduction

In the independent curriculum, especially in the local content subject of the Javanese Language in Central Java Province, there is puppet story material. According to Tyas (2018), wayang stories contain character values that the nation's generation must preserve. Therefore, it is necessary to learn puppet story material in schools so that students can preserve local culture.

However, learning puppet stories has several problems, including low student interest in puppet story material and low learning outcomes. Some of the influencing factors are teachers who lack mastery of technological media. Teachers have only been happy to use the lecture method. In addition, students only get reading material in the form of Javanese LKS, which makes them bored quickly. This is in line with the opinion of Putri (2016), who argue that puppet story material is only long reading material, which makes students too lazy to read the material and results in students not being interested in learning to listen to puppet stories. Seventh-grade students at MTs Nurul Ilmi also experience a similar problem. Students find learning wayang stories very dull. Students only stick to the LKS, which involves much reading. In addition, the reading material on the worksheet is complex for students to understand because it uses much language used by the puppeteers. In the worksheet, there is no listening material, while the puppet story material has two elements that must be achieved in the Merdeka curriculum, namely listening and reading elements. The most problematic element experienced by seventh-grade students at MTs Nurul Ilmi is listening skills. Perayani & Rasna (2022) state that listening can be called a 'process' because it involves several stages in its implementation. This is in line with Anggraini (2019) opinion that listening ability is one of the basic skills in language.

In learning puppet stories, there is no audio material, so the listening process does not go well. Based on the independent curriculum, the learning outcomes in the element of listening to class VII puppet story material, namely, students are able to analyze and evaluate the information contained in literary texts, such as ideas, thoughts, feelings, views, directions, or appropriate messages from puppet stories, such as the Ramayana Epic or other stories in visual and audio-visual forms. In contrast, in the learning objectives of puppet story material, students carry out listening activities in the form of audio and audio-visual material. Students are expected to be able to understand the contents of the puppet story text. Therefore, to achieve learning objectives tailored to these learning outcomes, students need material in the form of audio/audio-visual simulations.

The difficulties faced by students in learning puppet stories are also related to the lack of teacher creativity in teaching Javanese in the classroom. In this case, the use of creative learning models and media is needed so that Javanese language learning becomes more engaging for students, especially in puppet story material. However, this has not been applied by teachers because the learning models and media used still seem monotonous and less varied. Although the school administration has been recorded as using the Merdeka Curriculum, teachers still tend to use the lecture method in delivering lessons. This problem causes students to dislike puppet story material, especially listening skills, which do not run

effectively even though innovation in the use of appropriate media and learning methods is thought to improve learning outcomes and student interest in puppet story material (Mahelingga, 2020; Wulandari et al., 2023; Taukit et al., 2023).

The same problem in learning puppet stories has been studied by Baruni (2018). In his research, Baruni (2018) found that students had not fully understood some of the essential competencies that had been taught. The students at SMP Negeri 2 Bungkal Grade VII also consider Javanese language learning to be an uninteresting lesson. Siswantari & Mukarromah (2021) conducted research and found the problem of delivering material about the puppet character Yudhistira to students who were still not optimal, so they did not understand the character well. Devi & Maisaroh (2017) and Tussifa & Nurhabibah (2021) also researched learning puppet stories. In the study, it was found that students were not interested in learning puppet stories because learning seemed dull, the teacher explained the material using the lecture method, and there was no use of learning media that supported learning. Some of the studies above reveal the problem of reading and writing puppet stories. From some of the literature reviews that have been described, this research complements the results of previous research by concentrating on overcoming the problem of listening to puppet stories.

Related to story material, both Indonesian and foreign language stories also experience various types of problems. Arisman & Haryanti (2019) conducted research and found the problem of students' lack of interest in learning narrative stories because teachers use conventional methods in teaching, and learning is only teacher-centred, causing no student participation in class. So, not only do I learn puppet stories that experience problems, but stories in Indonesian and foreign languages also experience problems.

To overcome the above problems, it is necessary to innovate learning media for listening to Javanese puppet stories at MTs Nurul Ilmi. The development of learning media for wayang stories using this website is intended to complement previous research, which is likely to increase interest and motivation in learning the material of wayang stories with online learning media websites. Web-based learning media itself has several interesting advantages. Nugroho & Grendi (2021) stated that websites on the internet are the right choice as an alternative option in choosing teaching methods, both for face-to-face meetings and distance learning. Websites can be accessed anytime and anywhere. Suryandaru & Setyaningtyas (2021) said that a website is software that can contain images or text, which is connected via the internet. This information is interrelated and connected through a network of pages known as hyperlinks (Pratama, 2021). Nababan et al (2023) state that utilizing learning media in education have a good effect, namely increasing student focus in the learning process. Therefore, the use of website media is expected to help students understand and learn puppet stories and listening skills because they can contain pictorial or audio-visual material.

In this research, educational websites are used to develop learning media for learning puppet story texts. This website-based puppet learning media aims to improve students' listening skills and interest in learning. By utilizing website-based learning media,

students can be directed to understand the material better, enjoy the learning process, and appreciate the beauty of various knowledge presented in a structured manner through this platform (Faishol et al., 2022). The results of trials on the use of website media have also been carried out by Nuryati et al (2022). It was stated that website media can increase students' interest and involvement in learning. Therefore, the development of website-based learning media is very appropriate for use as a support for Javanese language learning activities for listening skills for puppet story material.

The novelty of this research compared to previous research is that this website has the advantage of other learning media that are packaged more practically and can create new experiences for students to interact with the material. This website can connect to other applications by linking links. This website is a learning platform for seventh-grade puppet story material, which contains simulation material and questions. Students do not have to follow learning in class, but they can access distance learning and only need to use a network, a handphone, or a PC.

Based on the background of the problem above, it is necessary to develop learning media for website-based puppet story material for VII grade students of MTs Nurul Ilmi. This study aims to (1) describe the need for learning media for website-based puppet story material for class VII MTs Nurul Ilmi; (2) make a prototype of learning media for website-based puppet story material for class VII MTs Nurul Ilmi; (3) describe the results of the validation test of learning media for website-based puppet story material for class VII MTs Nurul Ilmi; and (4) describe the results of the feasibility trial of learning media for website-based puppet story material for class VII MTs Nurul Ilmi on a limited basis.

B. Method

The research design used in this research is research and development (R&D). According to Sugiyono (2016) there are ten steps of research and development (R&D) research, namely potential and problems, gathering information, product design, design validation, design improvement, product trial, product revision, trial use, product revision, and mass product manufacturing. This study took six of the ten steps of Sugiyono's R&D method, based on the formulation of the problem, namely potential and problems, gathering information, product design, design validation, design improvement, and limited product trials.

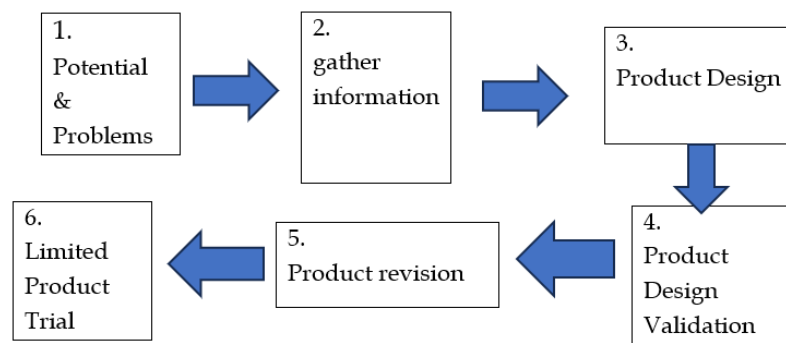


Figure 1. Research Flow

The first step is potential and problems. To find out the potential and problems, researchers conducted observations and interviews at MTs Nurul Ilmi. The potential need for website media is a learning device in the form of a laptop / PC, android, LCD and wi-fi. In learning to listen to puppet stories at MTs Nurul Ilmi experienced problems, namely low student interest in puppet story material and low learning outcomes. Some influencing factors are teachers who lack mastery of technology and media. The second step is collecting information. At this stage, the needs of students and teachers are analyzed. This information collection is in the form of data that will be used to develop learning media by distributing student and teacher needs questionnaires. The third step is product design. The product design is a prototype of website media that contains the initial appearance when opening the website media to the evaluation stage. The product design contains learning outcomes, learning objectives, and listening material, and the evaluation contains questions about puppet story material. Puppet story material is based on the Merdeka curriculum for junior high school level, namely using the Ramayana Epic puppet story material. This media contains three listening materials: Kidang Kencana, Patine Jatayu and Anoman Obong. The material was chosen because it is age-appropriate and appropriate for use in junior high school-level learning. The fourth step is media and material expert validation. The website media was tested by experts in order to determine its feasibility.

$$P = \frac{\sum x \times 100\%}{\sum xi}$$

Description:

P = Percentage Score

$\sum x$ = Number of answers for each respondent

$\sum xi$ = Maximum number of scores

C. Result and Discussion

Result

The results and discussion in this study are in the form of website-based learning media products for listening skills for puppet story material at MTs Nurul Ilmi. Researchers

use Sugiyono's method, based on the formulation of the problem, namely (1) describing the needs of learning media for website-based puppet story material for class VII MTs Nurul Ilmi; (2) making a prototype of learning media for website-based puppet story material for class VII MTs Nurul Ilmi; (3) describing the results of the validation test of learning media for website-based puppet story material for class VII MTs Nurul Ilmi; and (4) describing the results of the feasibility trial of learning media for website-based puppet story material for class VII MTs Nurul Ilmi on a limited basis.

The needs of students and teachers for learning media for puppet story material based on the website

Based on observations and interviews, researchers can find out the needs of students and teachers in learning wayang stories and in learning to listen to puppet stories at MTs Nurul Ilmi, experiencing a problem that is low student interest in puppet story material, especially in listening learning. Some influencing factors are teachers who lack mastery of technological media. Teachers only like to use the lecture method. In addition, students only get reading material in the form of Javanese LKS, which makes them bored quickly. To overcome the above problems, it is necessary to innovate the learning media for listening to Javanese puppet stories at MTs Nurul Ilmi. According to [Maesyaroh & Insani \(2021\)](#), the development of media along with the times is significant to produce media that is of higher quality and easy to understand. The learning media that will be developed later must be in line with the times so that students can learn Javanese seriously and effectively, and this is in line with the opinion of [Insani & Mulyana \(2019\)](#). At this stage, the needs of students and teachers are analyzed. This information collection is in the form of data that will be used to develop learning media by distributing student and teacher needs questionnaires.

In this case, the prototype design on the website media needed by students and teachers is media with a background display on the website in the form of a puppet image with a blue background. The font needed for the media website is Times New Roman with a blue background.

Prototype of Website-Based Learning Media for Puppet Story Materials

Researchers designed a prototype of website-based learning media for listening skills for wayang stories at MTs Nurul Ilmi which aims to increase student interest in listening to cerota wayang. This website can load sound images and can link to other pages. [Muhammad & Tempola \(2023\)](#) also argue that a website is a collection of pages that display textual data, image data or moving image data, animation data, sound, video and a combination of all of these, both static and dynamic, which form a link information system. In this building, everyone is connected to each other's network. This website product design, when initially opened, will immediately enter the "home" view. The "home" view contains several menus that can be "clicked". The home view contains learning outcomes and several menus. The "home" display has a brown and blue background according to the

philosophy of the shadow puppet image, and the blue colour is according to the requests of students and teachers. The "home" view can be seen in Figure 2.



Figure 2. "Home" is the Initial View of the Media

The "home" view consists of three menus/options leading to materials and questions. All materials contain audio-visual material. Each option/ menu has a different type of learning model. The first menu contains the classical learning menu. This classical learning contains simulation material and multiple-choice questions totalling five questions. Classical learning is usually conducted in class with a teacher. The second menu is the group learning menu. This group learning can be done inside or outside the classroom by forming groups. The purpose of group learning is to improve communication between students so that students participate actively in learning. This agrees with [Ramadhan et al \(2022\)](#), who stated that group learning could lead students to engage in social interactions with the aim of deepening knowledge while encouraging them to take responsibility for their learning and that of their peers. The third menu is the self-evaluation menu. The evaluation contains simulated material using the YouTube platform with a duration of approximately 4 minutes and multiple-choice questions as well as descriptions. This self-evaluation learning is to measure and optimize the ability of each individual. This is in line with [Pratama \(2021\)](#) research, which says that learning activities focus on each individual to catch up and optimize their potential. Access to the learning menu on the "home" display can be found here.



Figure 3. Option View to Audio-Visual Materials and Questions

In the bottom "home" view, there are learning outcomes for puppet story material for class VII. The purpose of including learning achievements in the "home" view is so that students and teachers know what to achieve in puppet story material. In line with the opinion of Riyadi & Budiman (2023) that learning outcomes are targets designed in the education system in Indonesia with the hope that students are able to complete and achieve these goals. The display of learning outcomes for puppet story material can be seen in Figure 4.

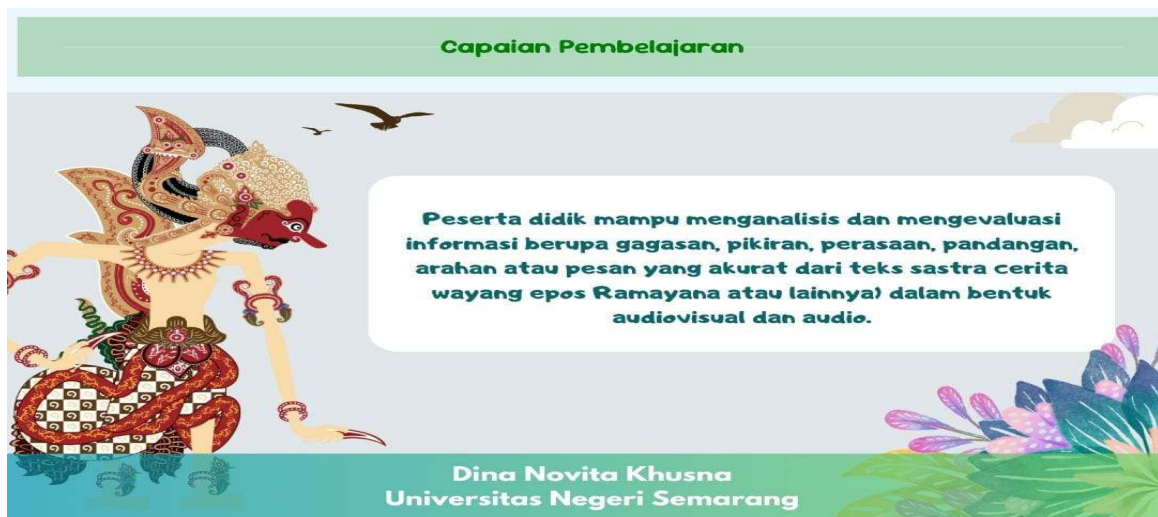


Figure 4. Learning Outcomes Display of Puppet Story Material

The website learning media that researchers have designed and developed has advantages. The advantage of this website is that it can attract students' interest in listening because there is audio-visual material. In addition, this website contains several questions with different learning models. This can be a teacher's creativity in carrying out varied learning, reinforced by the opinion of Polii & Polii (2022), who argue that the learning model is a strategy to achieve learning objectives. So, in this media, there are three types of varied learning models. This website can be accessed outside of class hours so students can review or study before starting learning. This website can also be accessed anytime and anywhere with the help of an internet connection. This is in line with his opinion (Fuady et al., 2021), which states that website media is easy to use for online learning.

Product Validation

1. Media Expert Validation

The results of this media validation focus on learning media that researchers have made. Some aspects that the validator will assess are media display, media presentation, and suitability of media content. The table of assessment analysis of the media is listed in Figure 5.

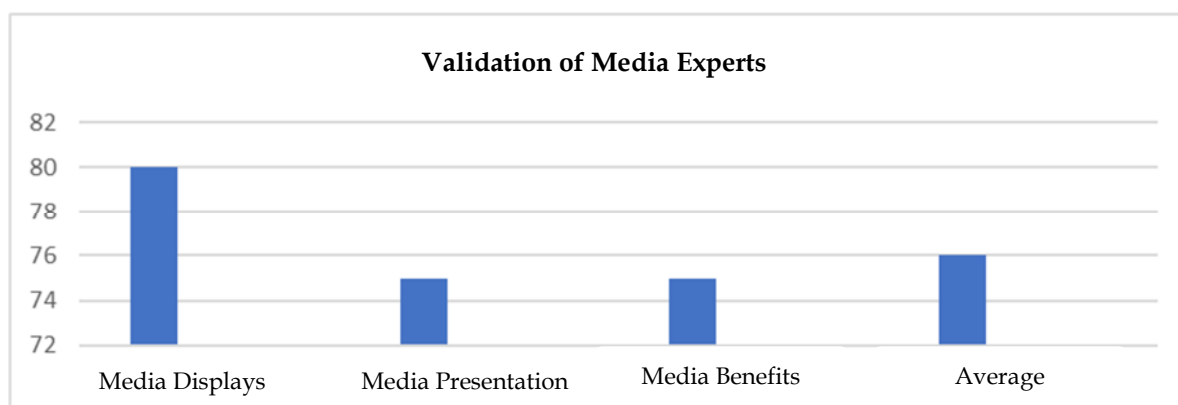


Figure 5. Media Expert Validation

The diagram in Figure 5 shows that there are three aspects of assessment: media display, media presentation, and media benefits. The media display aspect focuses on the appearance of the website, which consists of several combinations of colours, fonts, images and sounds. This is supported by Putra et al (2020), who state that the media display aspect includes a combination of colour, sound, and text arranged as needed to form an accessible display. The media display aspect received a percentage score of 80%. The second aspect, namely the media presentation aspect, contains the structure of the media. The media presentation aspect gets a percentage score of 75%, and the third aspect is the media benefits aspect. The benefits of the media are seen from the function and usefulness of this media in supporting learning, which results in a percentage score of 75%. With these results, it can be averaged overall with a score of 76%. This shows that the media validation value gets the interpretation category "very feasible".

2. Material Expert Validation

The results of this material expert validation contain four aspects, namely, the suitability of the material, language, accuracy of the questions, and the level of difficulty of the questions. Validation is done by giving a validation sheet to experts and calculating the percentage for each question item in the validation sheet. The following diagram can be seen in Figure 6.

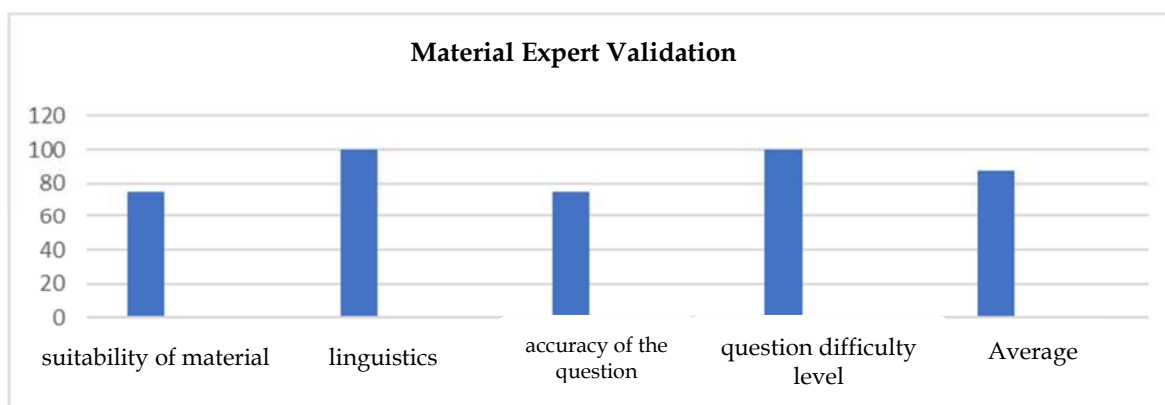


Figure 6. Material Expert Validation

The diagram in Figure 6 shows that in the material expert test on this website learning media, the suitability aspect of the material is assessed on whether or not the material is in accordance with the seventh-grade curriculum. The material suitability aspect gets a percentage score of 75%. The linguistic aspect gets a percentage score of 100%, assessed from the language used in the preparation of the material. The accuracy of the question gets a percentage score of 75%, which is assessed by the validator from whether or not the question is appropriate for class VII puppet story material, and the aspect of the level of difficulty of the question gets a percentage score of 100%. The average overall score of the material expert validation is 87.5%. The acquisition of this average shows that the material on the website learning media gets an interpretation of "very feasible" to be used for the learning process and trials with product improvements or revisions. This is reinforced by the opinion of [Efendi et al \(2023\)](#), who states that the development of material on website media is very feasible to facilitate students in understanding the subject matter.

Product Revision

After conducting media and material expert validation tests, this website-based learning media received scores and input from the validators. Suggestions from validators become material to revise the product to make it better in terms of media and material. This design improvement stage is carried out before the product is used for limited trials. Some input from the validators was related to improving both the media and the material presented. The input given by the validators includes the following: It is recommended to

add learning objectives to each learning menu, the second to add learning instructions, and the third to add question instructions.

1. Adding Learning Objectives

The initial design only included learning outcomes, so the material validator gave input to include learning objectives. The validator suggested giving and including learning objectives so that it is transparent about the activities that students do. Learning objectives are listed in all categories of learning models. The improved design can be seen in Figure 7. Before the revision, I added learning objectives plus learning objectives.

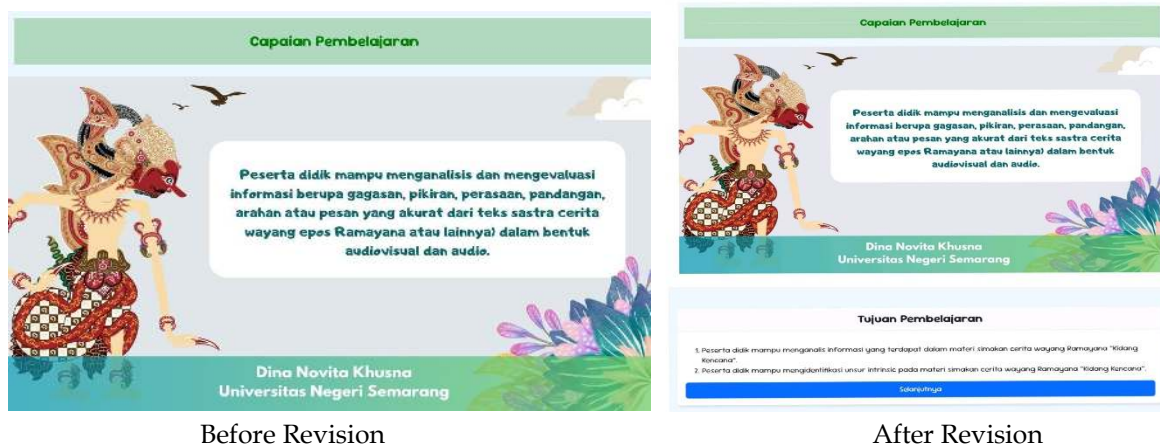


Figure 7. Improvements to Add Learning Objectives

2. Add a Prologue/Learning Guide

The initial design of audio-visual materials using the YouTube platform. Material playback is directed directly to playback, and there are no instructions or commands, so researchers made improvements by adding learning instructions. Learning instructions are located under the audio-visual material. The improved design can be seen in Figure 8.

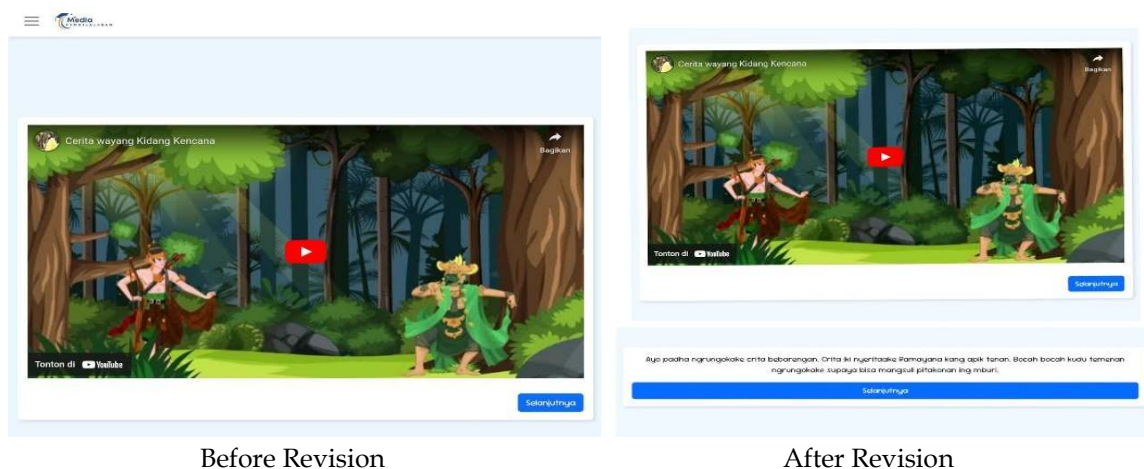


Figure 8. Improvements to add study guides

3. Add Question Hints

In the question display previously, there were no instructions for working on the questions, so in the question display, there were no specific instructions. Researchers revised it by adding question instructions to each learning model. Here are the question instructions: "Sawise ngrungokake crita ing dhuwur lan wis mudheng, let us choose and answer this question". Figure 9 shows the appearance of the website before and after being given a question clue.

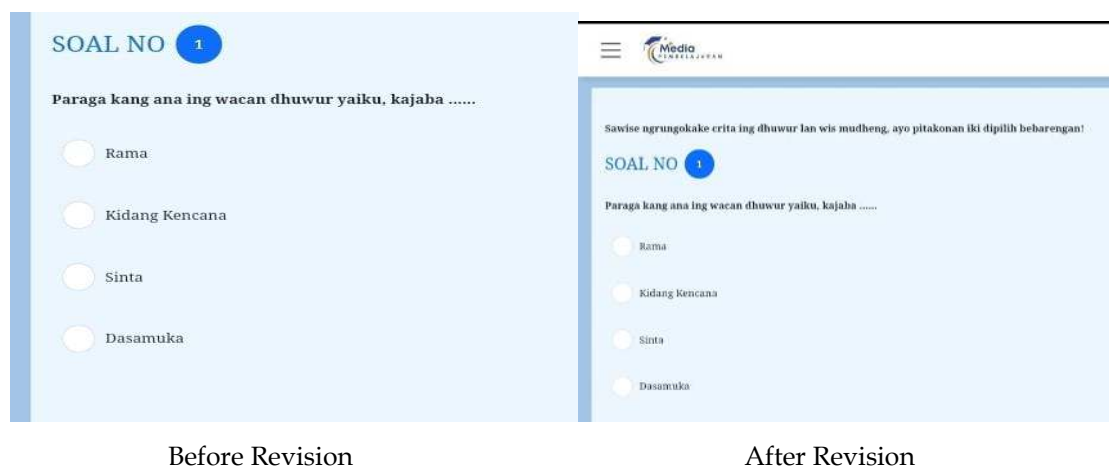


Figure 9. Improvements to Add Question Instructions

This website-based learning media can be accessed through the following link:

[MEDIA PEMBELAJARAN | HOME](#)

Product Trial Results

The results of this product trial were carried out to find out how students responded to website-based learning media on listening skills for puppet story material. This product trial has previously gone through product revision resistance. In this trial, random sampling between classes 7A, 7B, 7C, and 7D MTs Nurul Ilmi. Each class took six students, totalling 24 students, to use this website-based learning media and respond to this website learning media. Researchers asked students to form small groups of 4 people so that communication between students occurs. This is reinforced by the opinion of [Agustin et al \(2024\)](#). [Agustin et al \(2024\)](#) said that group learning has the benefit of students communicating and discussing with each other so that learning can be fun. The questionnaire given to students is eight questions that contain several aspects, including aspects of media design, material aspects and practicality aspects. The analysis produces data on students' responses to website-based learning media for listening skills for puppet story material presented in Figure 10.

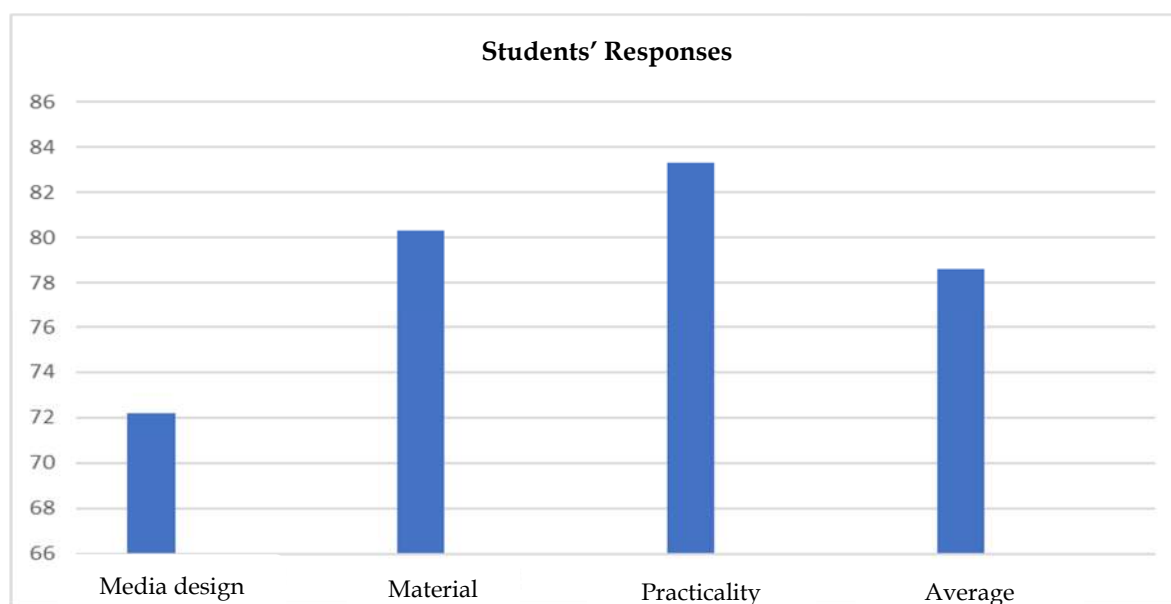


Figure 10. Diagram of Learner Response

Based on the diagram above, the results of students' responses to website-based learning media get an average score of 78.6% and enter the interpretation of "Very Good". This is because the score on the media design aspect scored 72.2%. Students see the media design aspect from the images, colours, and sounds in the media. In addition, the structure of the preparation in the media. The material aspect scored 80.3%, and the practicality aspect score scored 83.3%. With the interpretation category "Very Good", it means that the media developed by researchers can be used in Javanese language learning, especially the material of seventh-grade puppet stories to increase student interest in learning. This is reinforced by the opinion of [Setyadi & Qohar \(2017\)](#), who state that the results of the trial of the web media that has been developed show that students give a positive response to each aspect evaluated. In addition, this trial also proved "Very feasible" in increasing student motivation to learn.

Discussion

This website media can attract students' interest in listening and learning and make learning more fun. The results of this study are in line with the findings of previous research, which shows that learning media get a very positive and engaging response from students because the material becomes easier to understand with examples that can be seen directly ([Handayani et al., 2018](#)). This media has audio-visual media characteristics that can be heard and seen. The story material chosen is also suitable and appropriate for grade VII students.

The development of this website learning media based on expert validation is declared "very feasible" for use in learning Javanese language puppet story material. Reinforced research conducted by [Panjaitan et al \(2022\)](#) stated that web media is "very feasible" for attracting students' interest in learning. This is based on the advantages of this website's media, which can be accessed by Android anywhere and anytime with the help of

the internet. In addition, it facilitates student understanding in learning puppet stories and increases student interest in learning to listen.

D. Conclusion

Based on the results of research and development of website-based learning media for listening skills for wayang story material at MTs Nurul Ilmi, it can be concluded that the process of developing this website-based learning media is very feasible to use in supporting the learning process of wayang story material. This website-based media is able to increase student interest and motivation in listening skills for Wayang story material.

With this website-based media, learning at school becomes more fun. There is group learning that makes students actively interact with their group friends and between groups. The material in the media is also efficient because it can be accessed using an Android device anywhere and anytime. Students can learn first independently before learning in class. In addition, students can also review the material when they are at home.

With the existence of website-based learning media for listening skills for puppet story material, teachers are expected to have a broader view of finding learning resources that can increase learning motivation. The results of this study are also expected to help teachers to better utilize technology-based media as a means of supporting creative learning. In addition, suggestions should be made for teachers to be more creative in implementing learning so that students are more enthusiastic and interested in understanding the material.

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