

## **Development of website-based learning media on the material of Kingdoms in Indonesia and regional heroes phase B**

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**Abstract:** *The development and advancement technology has many positive negative impacts and changes in various fields, especially in the field of education. This also raises new challenges from the many challenges that exist. The era of globalization now spread of information so fast from internet, with many benefits, it is hoped that it can make it easier for students to receive information to continue and add insight. This research uses the Research and development method with ADDIE model. The development of learning media in this study utilizes the articulate rise 360 application, this development chosed because the literature study found that this website-based learning media has proven to be an attractive innovative media, which is also a solution to several existing challenges. Based on the validation sheet has been distributed in two expert validators, has value 82.5% is obtained, which means that is feasible and can be applied in learning.*

**Keywords:** *learning media; website; hypermedia; application; history learning*

### **Introduction**

Technological advances have many advantages and challenges in various fields, one of which is in the world of education, in the world of education, of course, raises new challenges for teachers in Indonesia, namely producing learning media that is creatively innovative and able to keep up with the times. Moreover, for teachers in history subjects at the elementary school level to be able to develop even though its essence has now been combined with science and technology subjects into a new subject, namely IPAS in the independent curriculum without any new learning time adjustments, this makes technological advances have been utilized as one of the solutions to overcome this problem, according to research conducted by G.Sanska explaining that the influence of technology in the world of education has begun to vary (Sansaka Megahantara, n.d.), it is also said in research (Fatira et al., 2021), 2021; Zaini Miftach, 2018) with technological advances, students are expected to be able to easily obtain learning media that are creative, interactive and innovative. therefore, the development of teaching media is a must in teaching and learning activities (Azinar et al., n.d.; Budi & Santosa, 2017; Fatira et al., 2021) in history education (Sormin et al., 2017).

History learning is very important in shaping the personality and character of students to be able to distinguish good and bad behavior in society and society (Rulianto, 2018), in the implementation of history learning in the world of education, many educators use the lecture method because it is proven to have many advantages (Jainap, 2022) compared to other methods. However, learning history with the lecture method itself makes students quickly bored and bored (Kurniawan, 2020; Rulianto, 2018), this is in line with online learning

which states that this method has weaknesses as expressed by (Kurniawan, 2020), namely the learning time is too short, the same method but implemented with different learning is a big weakness for distance learning if it does not make maximum use of learning media. Utilizing technological advances in making teaching media has certainly become a necessity to be able to overcome these problems, but on the other hand this also makes the main problem for educators who are less familiar with technological developments (Karmedi et al., 2021). (Ahmad, 2014; Jainap, 2022; Karmedi et al., 2021; Kurniawan, 2020; Rulianto, 2018) agree on the development of teaching media that are more creative innovative and keep up with the times, especially in learning history in the current era of globalization.

Globalization is a process of globalizing society and does not recognize regional boundaries (Saodah et al., 2020). Which of course also has its own positive and negative impacts in Saodah's research also states that one of the positive impacts of globalization in the world of education is the ease of accessing digital information, by utilizing the internet all information and knowledge can be accessed through websites and downloaded without having to look for printed sources (Saodah et al., 2020). According to the Indonesian Internet Service Providers Association, the number of internet users reached 215,626,156 in 2023 (APJII, 2023), from research (Davidson- shivers, G. V, Rasmussen, K. L., 2018) also found forty percent of active website users (2018) and this value will continue to grow over time, with this data it can be concluded that many Indonesian citizens can access the internet.

In research (Nofaizzi et al., 2020) said that website-based learning can improve students' cognitive abilities, (Kusniawati & Wahyuning Subayani, 2023) also said that learning media must be creative and innovative so that it can be maximally utilized, and the importance of learning history in elementary schools has been described in several previous studies, one of the problems found in research (Kurniawan, 2020), also became the main point in this study. The purpose of this research is to develop historical learning media for phase B elementary school students based on the website, to become a learning media that is more up to date, interesting, creative, innovative, and interactive and can be accessed by students inside and outside of class hours, The development of learning media itself has many applications that support in this study utilizing the Articulate rise 360 application to create web-based learning. The use of web-based learning media was chosen because according to (Abdurrokhim et al., 2022) the use of websites continues to increase rapidly over time. The use of learning through this website was also chosen because it has various advantages, including enabling every learner anywhere, anytime, to learn anything (Uno & Ma'ruf, 2016), can be accessed via the internet network (DR. Rusdin Djibu, 2020), the content of the material can be changed easily and adjusted to students (Uno & Ma'ruf, 2016), and flexible learning time (Januarisman & Ghufon, 2016).

## Method

The method used in this research is research and development (R&D). according to Brog and Gall (1989) in Sumarni's research states that R&D is research and development is a process used to develop and validate educational products (Sumarni, 2019). In line

with that Nusaputra (2015) in Okra riri's research has also defined RnD as a research method that is deliberately, systematically, used to find, formulate, improve, develop, produce, test the validity, effectiveness and practicality of certain superior products, models, methods / strategies / ways, services, procedures (okra, Riri. Yulia, 2019). From several studies that have been cited, it can be concluded that R&D is a method used in research to produce, test, or develop a product, through procedures that produce something superior and useful.

The media development model uses the ADDIE model which consists of Analysis design develop implementation and evaluation. this model is used because this model describes a systematic approach to instructional development, according to Dwiqi the ADDIE development model has advantages because at all stages it always goes through the evaluation stage first, so that it can minimize the slightest errors or shortcomings from the start. (However, due to the limitations possessed by the author, this research is only limited to the develop stage, while the stages are as follows.

Analysis, At this stage collecting data through interviews and literacy studies and observations. Design, At the design stage, researchers create concept maps and storyboards using Microsoft Word, in the storyboard itself there is a learning flow and a list of hypermedia assets needed. Develop, At the develop stage, researchers collect hypermedia assets listed in the storyline which are then implemented all into the Articulate 360 application, then will be entered into the database then the address / link of the finished learning media will be disseminated through barcode pamphlets made in the Canva application.

**Table 1.** Material validation table

No.	Learning Material Assessment		Number of questions
	Assessment aspect	Assessment Indications	
1	Content eligibility aspect	Material Coverage	3 bullet questions
		Material Accuracy	3 bullet questions
		Presentation Technique	2 bullet questions
2	Contextual assessment aspects	The Nature of Contextualization	4 question bullet
3	Language assessment aspects	Straightforward	5 bullet questions
		Interactive	1 question bullet
		Accuracy of language rules	2 bullet questions

In the material validation assessment, the first lattice assesses the aspects of the feasibility of the content of web-based learning, such as the relationship with learning outcomes, learning objectives and the material presented, in the contextual assessment aspect assesses the limitation of very broad historical material to remain in accordance with the learning outcomes in phase b, the last aspect in material validation is the selection of words and command sentences that are appropriate for students, the use of interactive web-based media with students, and the accuracy of language in web-based learning media.

Table 2. Media validation table

No	Lerning material assesment		Number of questions
	Assessment aspect	Assessment Indications	
1	Eligibility Aspects Graphics	Initial display desain	3 bullet questions
		Video Content Design	4 bullet questions
2	Media Quality Aspects	Video Display quality	2 bullet questions
		Sound Clarity	3 bullet questions
3	Media Layout Aspects	Duration of Video	2 bullet questions
		Presentation Media	3 bullet questions
		Animation	3 bullet questions

The media validation assessment grid discusses the feasibility of graphics such as the selection of visual assets and other hypermedia assets, the quality of the media contains the resolution and sound that will be presented to students, in the assessment the animation displayed is simple and easy to use.

Acording from prasetyo (2015) in his research, the score for media feasibility is shown in table 3.

Table 3. Media feasibility and material feasibility

Table media feasibility and material feasibility		
No	Media feasibility score	Category
1	85 – 100	Very feasible
2	69 – 84	Feasible
3	53 – 68	Moderately feasible
4	37 – 52	Less feasible
5	20 – 36	Not feasible

The scores obtained from material validators and media validators are processed using the formula quoted from (Arikunto: 2009) in (Ernawati, 2017), namely the number of scores obtained divided by the maximum number of scores multiplied by one hundred. With the overall value of the media validator plus the overall value of the expert validator divided by the number of validators divided by the number of valildators then multiplied by one hundred. And the results of the assessment get a value of eighty-two point five, with the following eligibility categories.

### Results and Discussion

The challenges of learning history in the world of education is students who get bored quickly, because the methods and teaching media used in learning and teaching activities are very monotonous (Rulianto, 2018). In research (Kurniawan, 2020) explains that the methods used should not be monotonous and media development is needed especially in history lessons to reduce students who feel bored with history learning, irrational learning time, and are considered interesting for students of the era. website-based learning media was chosen because it has proven to be valid in efforts to overcome the challenges of learning history in the world of education (DR. Rusdin Djibu, 2020). Website-based learning media has also succeeded in increasing students' cognitive

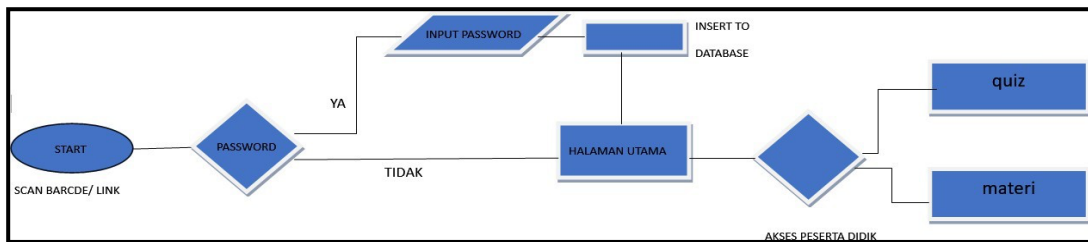
knowledge as the use of website-based learning media develops in students (Nofaizzi et al., 2020), in research (Abdurrokhim et al., 2022; Uno & Ma'ruf, 2016) also agreed that website-based learning media proved to be efficient in the learning and learning process, can be accessed easily by students (Uno & Ma'ruf, 2016) using smart phones, laptops, tablets connected to an internet connection, and the learning time of students through the website is very flexible (Januarisman & Ghufro, 2016), because with the use of this media it can be accessed by students both inside and outside of students' lesson hours by accessing the website address/link or barcode shared by the teacher. The development of this website-based teaching media goes through several stages including

At the analysis stage, researchers collected data using the literature study method which has found that history education at the education level in Indonesia is very important, as stated by Kurniawan, (2020). While a lot of learning was done before the Covid-19 outbreak hit using the lecture method. from interviews conducted by Azinar et al. (2014) there were many previous history lesson educators who often used the lecture learning method because it was considered the most suitable method for social studies learning, Mashami also revealed in Lia Pradita's research that the lecture method is more practical in preparation for implementation and in other aspects compared to using learning media (Pradilasari et al., 2020).

In research (Kurniawan, 2020; Kusniawati & Wahyuning Subayani, 2023) agreed that the use of technology in the field of education must be developed and utilized to the fullest. Technological advances that have developed rapidly have made major changes to science (Fatira et al., 2021) as Opan Arifudin said, the use of digital technology is a revolutionary process. which inevitably must be done. With the rapid development of today, it will have an impact on life, especially the world of education in the process of exchanging information, according to Akrim M, there are no restrictions in the world to exchange information that can create positive progress, through applications in human life progressing towards applications to exchange information and science, (Akrim, 2018).

Based on the results of an interview conducted by Zuhria (2022) with a history teacher in the city of Semarang said that now information can be found easily obtained and at the same time found the problem of the many sources of information there are differences and errors in the delivery of material (Zuhria et al., 2022) This is also a positive and negative factor for students because they are free to find information without being validated by teachers and / or experts. The role of teachers needs to be improved because in his research Kurniawan (2020) has drawn the conclusion that teachers in history must maximize the use of technology in the process of learning and teaching activities (Kurniawan, 2020). The result of the analysis stage is the need for appropriate media development according to active, innovative, and also creative and makes students easier to learn, understand and understand the content, so that later it can be utilized properly by educators and students so that the desired goals and achievements in learning can be achieved and make learning and teaching activities more enjoyable.

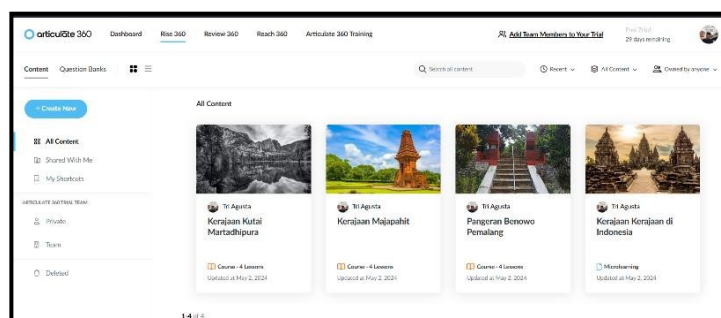
The second stage is Design (*design*) this stage begins with determining the essence /learning achievements and learning objectives to be conveyed to students, using language and discussion that is adjusted as needed, in this research prototype takes material sourced from the 2022 revised cp in phase b of the ipas subject. Followed by making a storyboard using Microsoft Word, in the storyboard itself there is a flow of material along with the location of hypermedia assets that support learning. Here is a concept map that students will go through.



*Image 1* Flowchart of web-based learning media.

Next is the Design stage (*develop*) collecting hypermedia assets such as visual images in the storyline and supporting media that have not been written to facilitate students' understanding in the learning process, as well as innovation in learning media.

Here the researcher uses the articulate storyline 360 application which will hereafter be shortened to AS3 to simplify writing, after the application installed users first download the rise 360 feature in the application. This feature is a tool that will be the main support in the formation of web-based learning media, in Image 1 below is the first appearance that will be seen by users.



*Image 2* Web-based teaching media display.

Next, implement the hypermedia that has been collected into the AR3 rise 360 application according to the storyliene that has been made, in Image 2 is an example of hypermedia assets that have been collected. And in Image 3 - Image 6 is the display that will be seen by the develop.

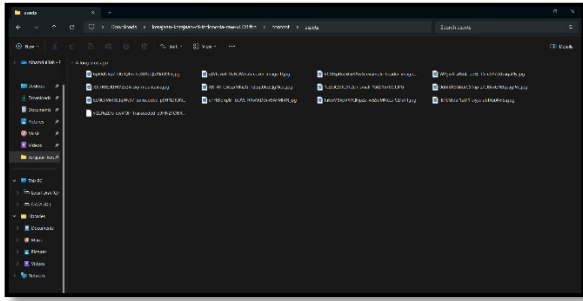


Image 3 Digital assets that have been collected.

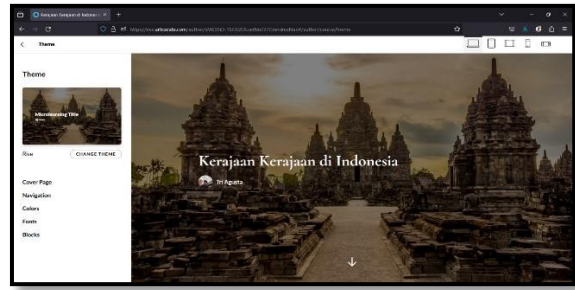


Image 4 Rise 360 view.



Image 5 Theme feature in the app.

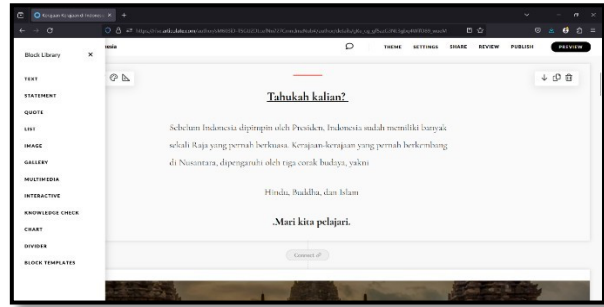


Image 6 Text feature in the app.

Not to forget, researchers also made adjustments to the language used in the 5th picture so that it could be understood by students. To enter digital assets, researchers used the hypermedia feature to enter digital assets.

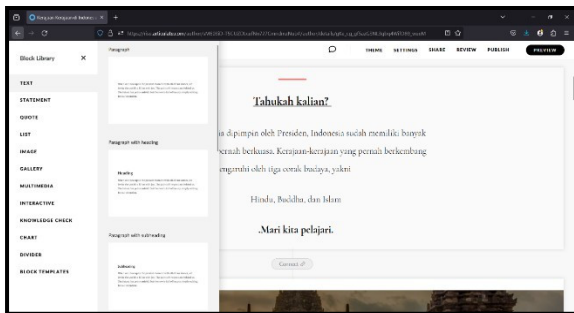


Image 7 Model text in the app.

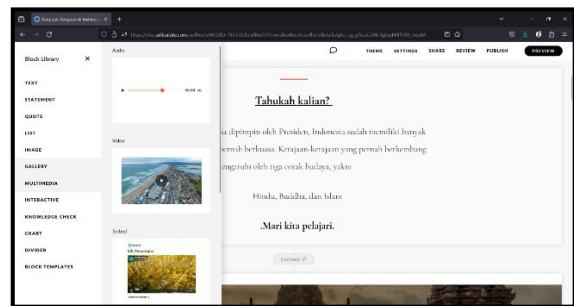


Image 8 Hypermedia feature.

To add hypermedia in the form of videos, researchers here use a link method that is directly connected to YouTube as in Image 8 which is then displayed learning videos, in addition to facilitating learning this method can also increase viewers on learning videos made by one of the YouTube authors which of course benefits both parties with the agreement that has been made.

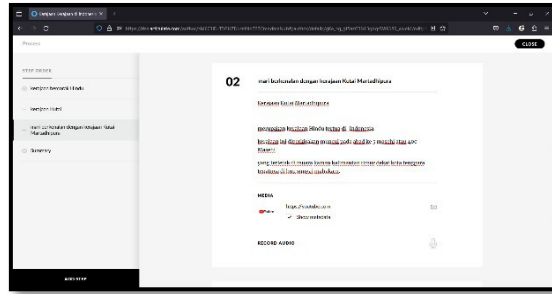


Image 9 Conceptual model of hypermedia.

After all the storyboards are implemented, researchers use the review feature in the upper right corner of the AS3 application as in Image 8 to ensure the appearance that students see, and do not forget to set the code to access the media and who can access the media. By using the link provided, students can access the learning media as in Image 9.

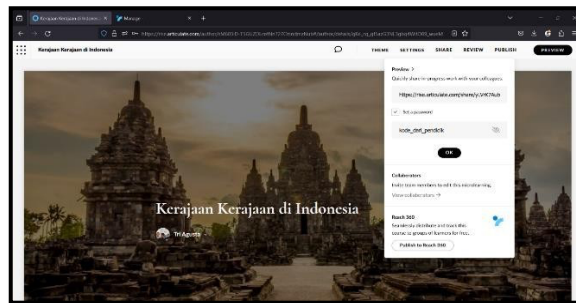


Image 10 Creation of the link to be shared.

Here the researcher makes a few changes to the link made to shorten the url or link using the bitly.com website, not only that, the researcher also changes the link to a barcode using a web that provides free link modifiers. As in picture 10

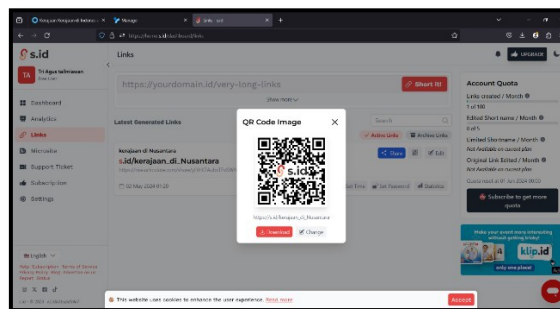


Image 11 Turning a link into a barcode.

Which is then put into a pamphlet to attract the attention and curiosity of students while increasing interest in learning history here using the Canva application as in Image 11 and Image 12.





*Image 12 Barcode display for students.*

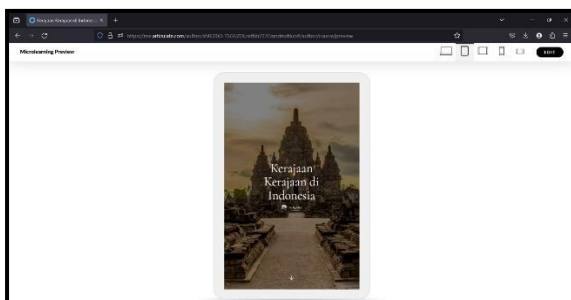


*Image 13 Barcode display for students.*

The following are images of the final results of products that have been made in the display of desktop computers in Image 13, smart phones (landscape) in Image 14, smart phones (portrait) in Image 15, tablets (landscape) in Image 16, tablets (portrait) in Image 17.



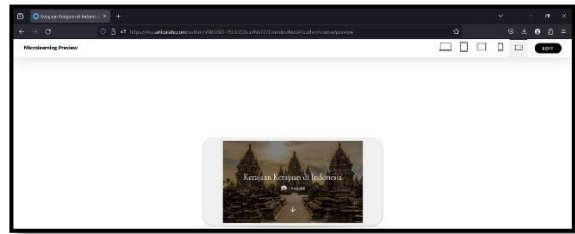
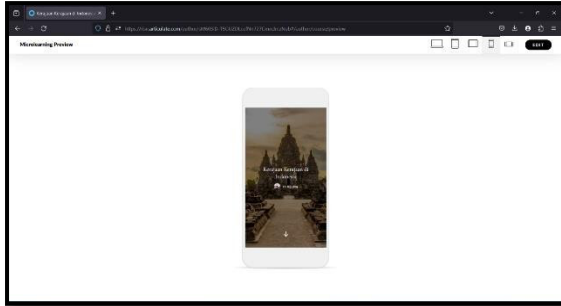
*Image 14 Website view for desktop.*



*Image 15 Website view for tablet (portrait).*



*Image 16 Website view for landscape tablet*



**Image 17** Website view for mobile phones (portrait). **Image 18** Website view for mobile phones (landscape).

Based on the results of the distribution of validation sheets that have been assessed by media expert validators and material expert validators, who are a teacher at the 02 Karangtalok elementary school, and a technician teacher at SMA 3 Pernalang, the results are shown in table 4.

**Table 4.** Validator score

<b>Validator</b>	<b>Media Validator</b>	<b>Material Validator</b>	<b>Average</b>
<b>Skor</b>	82	83	82,5 %
<b>Description</b>	Feasible	Feasible	Feasible

From the results described in table 4, it can be concluded that the development of this media is considered feasible based on the category of the media feasibility table shown in table 3, this of course requires the development of better media from the media that has been developed so that later it is hoped that this media can be applied and used by students in helping history learning, especially for phase B students.

**Conclusion**

Over time, the development of technology and the dissemination of information is so fast that it affects various sectors, especially in the education sector, the development of learning media used in the world of education must also be developed following the times that are so fast in disseminating information, one of the rapid dissemination of information in the era of globalization is using a website, which will continue to increase its users over time, the website itself has many benefits including being easily accessible anywhere at any time when it has internet access, responsive media with a variety of devices, the usage time is very flexible, and becomes an innovative, creative, interesting media if implemented into learning media. The development chosen in this R&D research uses the ADDIE model. The development of this website-based media itself has been validated and can be used optimally by educators in learning, especially in history lessons at the elementary school level, which is a solution to the problems found.

This website-based learning is proven to be able to make learning media more attractive and can be used using laptop devices, tablets, and smart phones of students by ignoring the remaining capacity of the devices owned by students, with this application students can get audio-visual learning media according to what is prepared by the learner in the hope that it can make one of the many active, innovative, creative and innovative learning media and facilitate students in the learning process.

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