Development of interactive learning media based on articulate storyline-3

by

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Abstract

Modernizing and utilizing technology in a practical and interactive learning process is driven by the development of science and technology. The teacher's contribution to learning activities as a facilitator and mediator provides facilities for ease of learning. Learning media based on Articulate Storyline 3 is one of the interactive multimedia options that can be used in the learning process. This type of development research is Research and Development (R&D). The development of learning media is carried out through ten steps in Research & Development (R & D) consisting of: 1) Potential and Problems, 2) Data Collection, 3) Product Design, 4) Design Validation, 5) Design Revision, 6) Trial Initial Product, 7) Product Revision, 8) End-Use Trial, 9) Final Product Revision and 10) Mass Production. Testing learning materials and media validation has met the very feasible category. This is evidenced by the results of the material expert validation of 90, with a percentage score of 85.71% and an average score of 4.29. The validation of media experts is equal to the percentage score of 87.86% and the average score of 4.39, indicating that the category group is feasible. Initial product testing in small classes has validly met the attractiveness and effectiveness categories in use. This is evidenced by the total eligibility score by students from user data, with a percentage of 83.08%. Based on the criteria in the eligibility table according to the Likert scale with a rate of 83.08%, it is in the very feasible category. Testing the final product of developing interactive learning media based on Articulate Storyline 3 in large classes has been valid to meet the eligibility and effectiveness categories.

Introduction

Renewal and use of technology in a practical and interactive learning process driven by developments in science and technology. Capital is what a teacher must have to teach in this digital era. The teacher contributes to learning activities as a facilitator and mediator, providing facilities for learning, creating learning conditions, and providing learning materials. With their positions as learning resources, facilitators, and mediators, teachers must be able to plan and create learning media that supports the learning process (Yudhi, 2013). Media is a means of transmitting messages or information in the teaching and learning process, which the message's source conveys to the target or recipient (Mahnun, 2012).

Learning media are tools that assist the learning process and function to clarify the meaning of the message or information conveyed to achieve the planned learning objectives (Surayya, 2012). Media use in the learning process provides meaningful benefits for teachers and students. Overall, the benefits obtained are that the learning cycle is more interesting, interactive, and practical, the quality of student learning can be maximized, and learning

activities can be carried out anywhere so that their thoughts will more easily influence students, can give students a clearer picture of the material being studied so that it cannot be avoided. That media has become very useful in the learning process.

The rapid increase in knowledge and innovation makes a significant commitment, especially using learning media in learning. One strategy for conveying knowledge is using computers or cell phones. Educators hope that they can deliver learning materials that are more creative, interactive, effective, efficient, and fun so that students do not get bored. The teacher's role in the classroom is to facilitate learning by providing optimal learning conditions, such as finding situations to increase student interest, motivation, activeness, and learning outcomes. Using learning media that is more interactive, creative, and effective is one way that a teacher can try to create this situation.

Using appropriate media can raise students' awareness, undoubtedly influencing learning outcomes. The most common way of teaching and learning media as a tool Setiawan (2019), media facilitates students effectively in the learning process. Hence, they can understand learning material that is difficult to understand. Learning media has a significant role in overcoming various obstacles, such as communication barriers and classroom limitations. It is necessary to have interactive learning media adapted to the times. Interactive media contains various elements, such as text, audio, video, graphics, images, and animation, to facilitate students' learning and give more meaning to it.

Interactive media is usually packaged in the form of animation, where using animation media in learning can stimulate students to be more enthusiastic about learning. Articulate Storyline 3-based learning media is one of the interactive media options that can be used in the learning process. Articulate Storyline 3 learning media is software that can create presentations (Mawaa, 2019). Articulate Storyline 3 learning media combines images, text, audio, visuals, graphics, and animation, which are made into learning media used in delivering presentations. Compared to several previous versions, the Articulate Storyline 3 version has several advantages such as trigger features, buttons, optimized publishing in web form, Articulate Online, LMS, CD, APK, and additional features that can make it easier to operate so that it can produce more exciting presentations.

To support the social studies learning process using Articulate Storyline 3 media, researchers then conducted observations at several schools in the Kroya sub-district. This observation aims to discover the learning media used during social studies subjects' teaching and learning process. Based on observations and data at SMP Negeri 3 Kroya on December 5, 2022, SMP Negeri 1 Kroya on December 7, 2022, at SMP Masyithoh Kroya and SMP Muhammadiyah 1 Kroya on January 9, 2023, according to the interview, social studies teachers at those schools understand that almost half of the students got grades that were not under the Learning Goal Achievement Criteria. From the interviews with the four teachers, it is known that all teachers have sound teaching competencies, as proven by their educational background and educator certification. The four teachers are also used to conducting learning using various technology-based audio-visual learning media.

In initial observations and interviews, it was discovered that the teacher had tried to use various media to carry out learning. Still, using these media was only an extension of the lecture method. In other words, media such as Canva or PowerPoint are used as a substitute for a

whiteboard. In contrast, teachers still use the lecture method to explain the material. Conventional learning methods using technology often result in a lack of student interest, motivation, and active learning, which impacts student learning achievement. Based on these observations, teachers must use interactive media such as Articulate Storyline 3 in social studies learning. Maximizing learning media from the perspective of students directly involved in using it is also essential. Therefore, using educational media such as Articulate Storyline 3 allows students to understand the abstract nature of teaching materials. It is interesting because it involves their active involvement. However, the smoothness, effectiveness, and efficiency of achieving learning objectives can be improved by using learning media in social studies subjects.

Method

The Articulate Storyline 3 learning media development design used was adapted from the research model and approach (Sugiyono, 2013) which suggests ten steps in Research & Development (R & D) consisting of 1) Potential and Problems, 2) Data Collection, 3) Design Product, 4) Design Validation, 5) Design Revision, 6) Initial Product Trial, 7) Product Revision, 8) Usage Trial, 9) Final Product Revision, 10) Mass Production. This development research uses ten steps from Sugiyono's research and development approach. The data collection techniques mentioned in this research are the methods used to obtain empirical data for research. The data collection techniques used were observation, interviews, and questionnaires.

Design validation is an activity process to assess whether the product design, in this case in interactive learning media based on Articulate Storyline 3 in the form of an application to support social studies learning, is suitable for use. There are two material and media validity tests by two validators. The data analysis technique is carried out by the validator, who then responds by marking the categories the researcher gave based on a Likert scale consisting of five assessment scales. Then, the media validation percentage results can be grouped into score interpretation criteria according to a Likert scale to conclude the suitability of the media based on the Likert scale interpretation criteria.

The technique for analyzing responses to the feasibility of interactive learning media by students and teachers is carried out in the following steps: 1) Adding up the scores for each item in the respondent's statement multiplied by the score weight according to the Likert scale. The maximum score is the maximum number of points on the Likert scale multiplied by the number of items. These percentage results can then be grouped into Likert interpretation criteria to summarize teacher and student responses. The following steps are carried out to analyze the pretest and posttest with normalized gain (N-gain): 1) Testing effectiveness after students receive treatment with the Articulate Storyline 3 learning media, a minimum calculation using the Gain score formula is used.

Result and Discussion

A material expert from a competent Social Sciences teacher validated research on the interactive learning media Articulate Storyline 3 material on economic activities for grade VII secondary school. The initial product testing of the interactive learning media Articulate Storyline 3 material for grade VII middle school economic activities was carried out on a limited basis to small classes, namely 1 class totaling 33 students at SMP Negeri 3 Kroya, which is located at Jalan Citarum Karangmangu Kroya, Cilacap Regency. The limited trial was conducted on March 30, 2023, from 07.30 WIB to 10.30 WIB SMP Negeri 3 Kroya. In addition, testing of the final product or large interactive learning media Articulate Storyline 3 economic activity material for grade VII middle school economic activity material will be carried out on April 15, 2023, from 08.00 WIB to 10.30 WIB at SMP Negeri 1 Kroya with 1 class totaling 32 students, located at Jalan Lieutenant Colonel Sudarso Bajing, Kroya District. The final or major use test at Masyithoh Kroya Middle School with 33 students will be held on April 12, 2023, from 08.00 WIB until 9.30 WIB at the address Jalan Merak No. 28 Bajing Kulon Kroya District and Muhamadiyah 1 Kroya Middle School with 1 class totaling 27 students will be held on April 10 2023 at 08.00 WIB to 09.00 WIB at the address Jalan Raya Mujur Kroya District.

This research achieved its objectives if it produced interactive learning media, Articulate Storyline 3, material for grade VII middle school economic activities that were suitable for both educators and students. The press developed said to be feasible after going through a validation process by both material and media experts, as well as the results of limited trials by students and teachers in the learning process and receiving a positive response from the student feasibility response questionnaire, pretest, and posttest results as well as the feasibility response questionnaire from the teacher. The research on developing the Articulate Storyline 3 learning media was taken from Sugiyono's research model and approach (Sugiyono, 2013).

Articulate Storyline 3-based learning media is one of the interactive multimedia options that can be used in the learning process. Articulate Storyline 3 combines images, text, audio, video, graphics, and animation into digital files used in delivering presentations. Articulate Storyline 3 has several advantages, such as trigger features, buttons, optimized publishing in web form, Articulate Online, LMS, CD, APK, and additional features that can make it easier to operate so that it can produce more exciting and interactive presentations which are expected to increase interest. , student motivation, and activeness in learning, which can ultimately improve learning outcomes.

Based on observations and data at SMP Negeri 3 Kroya on December 5, 2022, SMP Negeri 1 Kroya on December 7, 2022, at SMP Masyithoh Kroya and SMP Muhammadiyah 1 Kroya on January 9 2023 according to Siti Yunaenatun, S.Pd, and Darsini, S.Pd, Rayka Amalia Jannah, S.Pd, Nuryani, SE, the social studies subject teacher at the three schools, said that almost 50% of students still got a score less than the Learning Goal Achievement Criteria (KKTP), where the average final summative score for semester 1 of SMP Negeri 1 Kroya was 72 compared to KKTP 78, the average Final Summative score for Semester 1 of SMP Negeri 3 Kroya is 70 compared to KKTP 76, the average final Summative score for Semester 1 SMP Masyithoh Kroya is 67 compared to KKTP 70, the average final Summative score for Semester 1 SMP Muhammadiyah Kroya is 65 compared to KKTP 70.

Based on classroom observations, students can bring cell phones into the social studies learning process. However, teachers have not utilized Articulate Storyline 3 learning media, for example, which is interactive. The current design of the learning system is less attractive to students because it is dominated by traditional methods such as lectures using whiteboards, which causes students to get bored or fed up when participating in learning quickly and does not provide motivation or interest in learning so that the learning process receives less attention from students.

At this stage, to help realize the development of learning media, researchers need to obtain all the data required: 1) Flow of Integrated Social Sciences Learning Objectives for teaching materials about economic activities in the Merdeka Belajar curriculum. 2) Student books, material summary books, and other parts regarding economic activity material. 3) Media development literature and Articulate Storyline 3. 4) Journal literature, articles about media development and Articulate Storyline 3. Furthermore, the design of the Articulate Storyline 3 learning media can be seen in Figure 1 below.
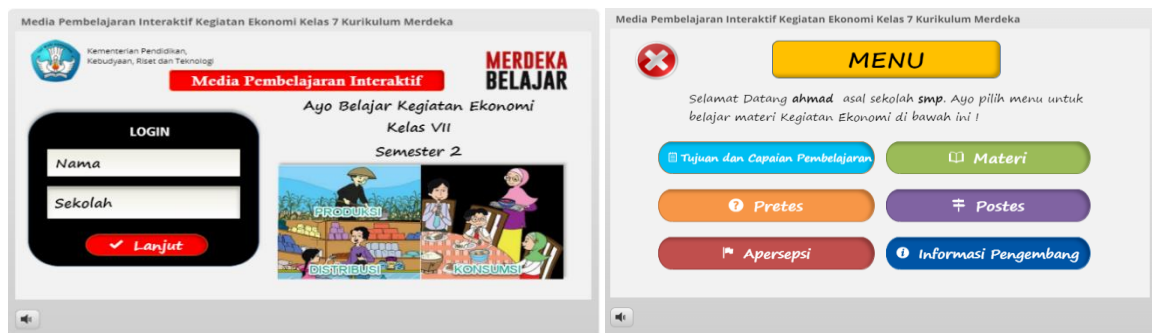

Figure 1. Articulate Storyline 3 Learning Media

As a start, social studies learning media can be made in the form of a screen design beforehand when running the application. The cover or first impression is not the main thing. However, it must be designed to meet the aesthetics and attract students' interest before learning. The cover made by the researcher was given one line. The cover includes a welcome greeting to learning media, the *Tut Wuri Handayani* logo, the independent learning curriculum logo, name, class, school, sub-subject names, semester, and curriculum name. The bottom part is navigation, which aims to go to the main menu before or next to the social studies learning media. The product has seven menu options: learning objectives and indicators, instructions for use, economic activity material, pretest-posttest, and developer information. Pretest and posttest assessments are learning assessments to assess students' initial abilities. The pretest and posttest questions are presented as multiple-choice questions on contextual issues related to economic activity. Before learning begins, students are first given pretest questions. In the pretest menu, students can answer 20 questions on economic activity material. In the pretest and posttest questions in the Articulate Storyline 3 learning media material on financial activities, students work on the questions in the learning media to get information on values or abilities before and after learning to practice their abilities.

The results of material expert validation show that the media development research instrument is 90 with a score percentage of 85.71%, and the average score is 4.29. This indicates that the category group is feasible and suitable for social studies learning media—material for class VII economic activities regarding the learning material's quality and content. Media testing by media experts is an objective assessment of media presentation and visualization using Articulate Storyline 3. Media experts' media testing is people who are competent in multimedia. To obtain information, suggestions, and constructive criticism regarding the interactive learning media Articulate Storyline 3 material for class VII middle school economic activities, a validation process is first carried out by media experts before initial product testing is carried out to obtain a suitable and quality product for use in learning.

The validator in this learning media is carried out by lecturers at Muhammadiyah University of Purwokerto (UMP), who have education, knowledge, and experience following this development media. The results of the media expert validation list show that the media development research instrument is 123 with a score percentage of 87.86% and the average score is 4.39, indicating that the category group is very feasible, meaning that the development of interactive learning media Articulate Storyline 3 is very suitable for use as a learning media—social studies material for class VII economic activities, both in appearance and programming aspects.

The revised product was tested in small group learning activities within 1 class at SMP Negeri 3 Kroya located at Jalan Citarum Karangmangu, Kroya District. With the first activity step, introducing the learning media Articulate Storyline 3 economic activity material to students as research subjects, asking students to do pretest exercises in the media, then distributing pretest questions and answer sheets manually to find out their initial abilities in economic activity material, followed by learning activity material economics with students using the Articulate Storyline 3 learning media, economic activity material. Researchers asked students to do posttest exercises in the media, then distribute posttest questions and answer sheets manually to determine the final ability of economic activity material as an added value to students to determine the effectiveness of the Articulate Storyline 3 interactive learning product as a media for the process of social studies teaching activities. Then, the students and teachers provided feasibility responses after using the Articulate Storyline 3 learning media in the Economic Activities material through manual interest instruments on paper.

Table 1.
Media Appropriate Responses by Students

Aspect	Item	Score				
		1	2	3	4	5
Presentation	Writing Clarity			3	22	8
	Clarity of instructions			3	25	5
	Ease of selecting menus			2	18	13
	Ease of use of buttons			6	24	3
	Clarity of button function			5	20	8
	Supportive music sound		2	6	18	7
	Video image clarity			7	15	11
	Video sound clarity			7	19	7
	Image color clarity			6	20	7
Content	Clarity of material			2	22	9
	Language effectivity			6	21	6
	Language clarity			9	15	9
	The video clarifies the material.			6	21	6
	Pictures clarify the material.		1	4	19	9
	Clarity of question formulation			3	22	8

Aspect	Item	Score				
		1	2	3	4	5
Learning Process	Difficulty level of questions			4	25	4
	Easy-to-learn material			2	21	10
	Challenging and interesting material			3	20	10
	Understanding useful material in everyday life			2	23	8
	Ease of selecting the learning menu			3	22	8
	Clarity of study instructions			4	22	7
	Suitability of questions to the material			3	19	11
	Feedback on student answers			4	25	4
	Using interactive learning media encourages enthusiasm and active learning.			2	9	22
	By using interactive learning media, it is more fun.			2	7	24
	Using interactive learning media increases learning achievement.			2	11	20
	Total	0	3	106	505	244
	Total Score	0	6	318	2020	1220
	Total Score					3564
	Total expected score					4290
	Eligibility Percentage					83,08
	Score Intervals					$80\% < x \leq 100\%$

The total score obtained is the sum of the scores for each statement item from all responses multiplied by the value in the Likert scale score range to determine the percentage of the suitability of the learning media for students. The highest score is determined by multiplying the number of items, 5 x 26 = 130, by the highest score on the Likert scale. The maximum score is calculated by multiplying the highest score by the number of respondents, 130 x 33 = 4290, with an eligibility percentage of 83.08%. After the feasibility percentage is determined, the results are grouped into score interpretation categories based on a Likert scale to draw conclusions about the feasibility response.

The total feasibility score based on user data is 3564 (83.08%), with a maximum score of 4290 (100%). A total score of 3564 (83.08%) was then put into the very feasible group based on the criteria in the feasibility response table using a Likert scale. Test the feasibility of teachers' responses to the interactive learning media Articulate Storyline 3 material on economic activities for class VII by 2 social studies teachers at SMP Negeri 3 Kroya as explained in Table 3 below.

Table 3. Teacher responses to the interactive learning media Articulate Storyline 3

No	Item	Score				
		1	2	3	4	5
1	The display style of this learning media is straightforward to understand				2	
2	The display design of this learning media is quite attractive.			2		
3	The words on educational materials are easy to read.					2
4	The photos shown are clear.				2	
5	The visuals displayed are by the material.			2		
6	Learning media is easy to use				2	
7	The use of learning materials is quite effective.			1	1	
8	The material in learning media is economic activity material.					2
9	The content of learning media is by the objectives and indicators of learning outcomes.				1	1
10	The information offered by the media is straightforward to understand.					2
11	There are no sentences in this learning media that have two meanings.					2
12	Examples of questions used in this learning media are appropriate to the topic.					2
13	This teaching material makes it easier for teachers to learn.				1	1

No	Item	Score				
		1	2	3	4	5
14	Students can utilize these learning resources themselves.				1	1
15	This teaching material allows students to learn without a teacher in the classroom.				1	1
16	I am very interested in using this learning media in the classroom.				1	1
17	This learning media content can motivate students to become more interested.					2
18	The content of this learning media can make it easier for students to understand it.				1	1
19	This learning media content can encourage increased interest.				1	1
20	This learning media helps motivate students to learn social studies excitingly.					2
	Total	0	0	5	14	21
	Total Score	0	0	15	56	105
	Total Score			176		
	Total expected score			200		
	Eligibility Percentage			88,00		
	Score Intervals			$80\% < x \leq 100\%$		
	Total			Sangat Layak		

The result shows that the total score in the percentage table for the feasibility of learning media is 88%. The pretest and posttest were conducted to determine differences in student learning outcomes before and after using the interactive learning media Articulate Storyline 3 material for class VII middle school economic education by being given time to answer pretest and posttest questions. The Learning Goal Achievement Criteria (LGAC) limit is 75 or 75% of all students reach this limit. The results of the N-gain calculation can be seen from the average student learning result for the pretest session of 66 after students used the interactive learning media Articulate Storyline 3 material on economic activities, which increased from the posttest average to 82. The N-Gain results were interpreted based on the n-interpretation table. -get according to (Hake, 1999). According to the results obtained, 47% of teaching and learning activities utilized Articulate Stroyline 3 learning media in the medium category, so it met the effectiveness criteria and was suitable for use as Articulate Stroyline 3 learning media in class VII social studies subjects.

According to the results of initial product testing in small class groups, the trial data showed that students' media interest was 83.08% based on the criteria in the attractiveness table, which met the Likers scale, including the exciting/worthy category. The results of the attractiveness test by the teacher were 88% based on the criteria in the attractiveness table, meeting the Likert scale, including the very appropriate category. Meanwhile, the pretest and posttest results were 84.85%, which shows that learning using Articulate Storyline 3 media meets the criteria for effectiveness. Based on the results of the trials in small class groups above, product revisions were not carried out because the Articulate Storyline 3 learning media was suitable for use in large groups.

The first final use trial step is to introduce the learning media Articulate Storyline 3 economic activity material to students as research subjects; the second is to ask students to do pretest exercises in the media, then distribute pretest questions and answer sheets manually to find out initial abilities in the economic activity material, followed by learning economic activity material with students using the Articulate Storyline 3 learning product, economic activity material. The third process asks students to do posttest exercises in the media, distribute posttest questions and answer sheets manually to find out the final ability of economic activity material as added value for students to find out the effectiveness of the

interactive learning media Articulate Storyline 3 as a social studies learning media. The four students and teachers provided feasibility responses after utilizing the Articulate Storyline 3 learning product in Economic Activities material through manual feasibility instruments on paper. Data from trials using large class groups for the feasibility of using the interactive learning media Articulate Storyline 3 by 91 students, carried out at SMP Negeri 1 Kroya, SMP Masyithoh Kroya, and SMP Muhammadiyah 1 Kroya with the results in Table 4 as follows.

Table 4. Test Results for Media Appropriateness Responses by Students

Aspek	Pernyataan	Skor				
		1	2	3	4	5
Presentation	Writing Clarity			2	26	63
	Clarity of instructions			7	33	51
	Ease of selecting menus			10	29	52
	Ease of use of buttons			8	38	45
	Clarity of button function			7	39	45
	Supportive music sound			11	33	47
	Video image clarity			4	34	53
	Video sound clarity			4	42	45
	Image color clarity			4	32	55
Content	Clarity of material			4	38	49
	Language effectivity			4	38	49
	Language clarity			3	30	58
	The video clarifies the material.			10	27	54
	Pictures clarify the material.			6	27	58
	Clarity of question formulation			5	38	48
	Difficulty level of questions			15	31	45
Learning Process	Easy-to-learn material			6	28	57
	Challenging and interesting material			6	34	51
	Understanding useful material in everyday life			2	28	61
	Ease of selecting the learning menu			3	40	48
	Clarity of study instructions			4	31	56
	Suitability of questions to the material			6	32	53
	Feedback on student answers			11	38	42
	Using interactive learning media encourages enthusiasm and active learning.			5	20	66
	By using interactive learning media, it is more fun.			2	28	61
	Using interactive learning media increases learning achievement.			7	22	62
	Score	0	0	156	836	1374
	Total Score	0	0	468	3344	6870
	Total Score			10682		
	Total expected score			11830		
	Eligibility Percentage			90,30		
	Score Intervals			$80\% < x \leq 100\%$		
	Total			Sangat Layak		

The total score obtained is the sum of the scores for each statement item from all responses multiplied by the value in the Likert scale score range to determine the percentage of the suitability of the learning media for students. The highest score is determined by multiplying the number of items, 5 x 26 = 130, by the highest score on the Likert scale. The maximum score is calculated by multiplying the highest score by the number of respondents, 130 x 91 = 11830, with an eligibility percentage of 90.30%. This percentage falls into the very feasible category. The overall feasibility score based on user data is 10682 (90.30%) out of a maximum score of 11830 (100%). The overall score of 10,682 (90.30%) is in the very feasible group based on the criteria in the eligibility table according to the Likert scale. The results of a significant test of the feasibility of learning media with teacher respondents can be seen in Table 5 below.

Table 2. Results of Large Test Media Appropriateness Response by Teacher

No	Butir Pernyataan	Skor				
		1	2	3	4	5
1	The display style of this learning media is straightforward to understand			1	4	2
2	The display design of this learning media is quite attractive.			1	3	3
3	The words on educational materials are easy to read.			1	2	4
4	The photos shown are clear.			1	3	3
5	The visuals displayed are by the material.				4	3
6	Learning media is easy to use				4	3
7	The use of learning materials is quite effective.				3	4
8	The material in learning media is economic activity material.				2	5
9	The content of learning media is by the objectives and indicators of learning outcomes.				3	4
10	The information offered by the media is straightforward to understand.				2	5
11	There are no sentences in this learning media that have two meanings.				1	2	4
12	Examples of questions used in this learning media are appropriate to the topic.				2	5
13	This teaching material makes it easier for teachers to learn.				3	4
14	Students can utilize these learning resources themselves.				2	5
15	This teaching material allows students to learn without a teacher in the classroom.				3	4
16	I am very interested in using this learning media in the classroom.				3	4
17	This learning media content can motivate students to become more interested.				2	5
18	The content of this learning media can make it easier for students to understand it.				3	4
19	This learning media content can encourage increased interest.				3	4
20	This learning media helps motivate students to learn social studies in an exciting way.				3	4
	Total	0	0	5	56	79
	Total Score	0	0	15	224	395
	Total Score			634		
	Jumlah Skor Yang di harapkan			700		
	Percentage of Appropriateness			90,57		
	Score Interval			$80\% < x \leq 100\%$		
	Criteria			Sangat Layak		

From the total score in the table, a percentage of 90.57% is obtained. The criteria are very feasible if this percentage is interpreted using a Likert scale. The total feasibility score from user data is 634 (90.57%), with the highest score being 700 (100%). Then, based on the criteria in the feasibility table according to the Likert scale, the total score of 634 (90.57%) is in the very feasible category.

Next, a large-scale student pretest and posttest are carried out; then the results are calculated using N-gain. Through this process, it can be seen that the average student learning result in the pretest session was 71; after students used the interactive learning media Articulate Storyline 3, the economic activity material increased from the posttest average to 85. The N-gain results were interpreted based on the n-gain interpretation table. According to (Hake, 1999). According to the results, 48% showed that teaching and learning activities using Articulate Storyline 3 learning media were in the medium category. It met the effectiveness criteria and was suitable as Articulate Storyline 3 learning media in class VII social studies subjects.

In this research, revisions to the final product are carried out if deficiencies or weaknesses exist in continuous use or actual learning conditions. Mass production activities

are carried out if, in sustainable use, there are no longer any deficiencies or weaknesses. Mass production is carried out for learning needs within the community, both at SMP Negeri 3 Kroya, SMP Negeri 1 Kroya, SMP Masyithoh Kroya, and SMP Muhammadiyah 1 Kroya, as well as educational units that need it. Based on the research and development results of Articulate Storyline 3-based learning media for social studies subjects for class VII SMP students, both small and large class validation tests have been successfully developed. The initial product validation test results of the interactive learning media Articulate Storyline 3 material for class VII middle school economic activities were carried out in a limited way to small classes, namely 1 class totaling 33 students at SMP Negeri 3 Kroya; 2 validators gave validation tests, material experts obtained scores 85.71% according to the criteria that have been determined, then this percentage is in the very feasible category. Meanwhile, according to predetermined criteria, the media expert validation test obtained a score of 87.86%.

The results of the student eligibility test obtained a total eligibility score of 3564 (83.08%) from a maximum score of 4290 (100%). The overall score of 3564 (83.08%) is in the very feasible group based on the criteria in the eligibility table according to the Likert scale. Likewise, the teacher eligibility test results reached a total eligibility score of 176 (88%) out of a maximum score of 200 (100%). The overall score is 176 (88%) in the very feasible category based on the criteria in the possible table according to the Likert scale. Meanwhile, the pretest and posttest results in the limited class group indicated success at 84.85%. Based on the findings, learning using Articulate Stroyline 3 learning media meets the effectiveness requirements and is very suitable for use as Articulate Stroyline 3 learning media in Integrated Social Sciences subjects.

Based on the results of trials using large class groups for the feasibility of using the interactive learning media Articulate Storyline 3 by 91 students, carried out at SMP Negeri 1 Kroya, SMP Masyithoh Kroya and SMP Muhammadiyah 1, a total of a maximum score of 11830 (100%) was obtained. User data eligibility was 10682 (90.30%). The total score was 10,682 (90.30%), then put into the very attractive or worthy group based on the criteria in the attractiveness table according to the Likert scale. In terms of teacher beauty reactions, a total attractiveness score of 634 (90.57%) from the highest score of 700 (100%) was determined from user data. Then, based on the criteria in the eligibility table, a total score of 634 (90.57%) was obtained, which is included in the very feasible category. Meanwhile, the pretest and posttest results in the significant group test obtained a success indicator of 89.01%. According to the results, learning using the Articulate Storyline 3 learning media meets the effectiveness criteria. It suits Articulate Storyline 3 learning media in Integrated Social Sciences subjects.

The results of the first previous research conducted by Slamet Aji Wibowo (Wibowo et al., 2022) entitled "Development of Interactive Learning Media in Class IV Social Sciences Learning Theme 9 Based on the Articulate Storyline 3 Application" aims to determine the validity, practicality, and effectiveness of learning media based on the Articulate application Storyline 3 in the Social Sciences subject Theme 9 Class IV SD Telkom Makassar. The development model used in this research is the 4-D model, which consists of defining, designing (planning), development (developjunt), and dissemination (dissemination). From the research conducted, validation of the practicality of the media was obtained with an average

score of 4.67 in the practical category, and the results of the validation of the practicality of student responses obtained an average of 4.70 in the convenient category. Meanwhile, the results of practicality validation by teachers received an average of 4.73 in the convenient category. For effectiveness validation results, an average of 3.94 was obtained; this shows that interactive learning media can be used well.

The research above has similarities with this research, including 1). Development of Interactive Learning Media Based on Articulate Storyline 3. 2). The results of the research show that this learning media is suitable for use. 3). Learning media validation techniques validate the practicality of learning materials and media, the practicality of student responses to learning media, and the practicality of teacher responses to learning media. Meanwhile, the differences with this research include: a). Learning materials for class IV theme 9 elementary schools, while this research uses social studies learning materials for class VII middle school, b). The research subjects were elementary school students, while in this research, the research subjects were middle school students. c). The development model is a 4-D model that consists of defining, design (planning), development (development), and dissemination (dissemination), while this research uses the Sugiyono approach development model with ten steps in Research & Development (R & D).

The second previous research was conducted by Nurul Khusnah (Khusnah et al., 2020) with the title "Development of Talisman Learning Media using Articulate Storyline" aimed at developing Talisman learning media using Articulate Storyline for class VIII of Jeneponto Middle School. This research development model uses ADDIE, which contains 5 stages: Analysis, Design, Development, Implementation, and Evaluation. From research into the development of Talisman learning media using Articulate Storyline for class VIII middle schools, the results were valid and practical by obtaining an average material validation test of 4.69, an average media validation test of 4.75, an average evaluation question validation test of 4.79, a teacher response questionnaire validation test. 3.94, based on validity criteria, the Amulet learning media using Articulate Storyline is declared valid. Meanwhile, the teacher response questionnaire validation test obtained a percentage of 94%, which means that the Amulet learning media using Articulate Storyline was declared valid and practical.

The research above has similarities with this research, including 1). Development of Interactive Learning Media based on Articulate Storyline 3. 2). The research results show that this learning media is suitable for use. 3). Validation techniques for learning development include validating the practicality of material, learning media, evaluation questions, the practicality of student responses to learning media, and the practicality of teacher responses to learning media. Meanwhile, the differences in the research above are 1). ; a). Learning materials for class IV theme 9 elementary schools, while this research uses social studies learning materials for class VIII middle school, b). The development model uses ADDIE, which contains 5 stages of Analysis, Design, Development, Implementation, and Evaluation, while this research uses the Sugiyono approach development model.

The third previous research conducted by Viola Salsabila (Selsabila & Pramudiani, 2022) was entitled "Development of Articulate Storyline Interactive Learning Media Based on

Digital Literacy in Social Studies Learning for State Madrasah Ibtidaiyah Students," which aimed to analyze the quality, quality and response of teachers and students to learning media interactive Articulate Storyline based on digital literacy. The validation test results by two validators, namely media experts, obtained a percentage value of 72% interpreted in the feasible category; material experts obtained a percentage value of 80% interpreted in the very appropriate category.

Student responses to learning media were 90% in the appropriate category, while teacher responses to learning media were 85% in the proper category. The research above has similarities with this research, including 1). Development of Interactive Learning Media based on Articulate Storyline 3. 2). The research results show that this learning media is suitable for use. 3). Validation techniques for learning development include validating the practicality of the material, learning media, the practicality of student responses to learning media, and the practicality of teacher responses to learning media. Meanwhile, the differences in the research above are, first, social studies learning materials for grade IV MI while this research uses social studies learning materials for grade VIII, b). The research subjects above were grade IV students of MI; for this research, subjects were class VII students of SMP, c). The development model uses ADDIE, which contains 5 stages: Analysis, Design, Development, Implementation, and Evaluation.

Conclusion

This product development design achieves its objectives by producing an interactive learning media product, Articulate Storyline 3, focused on material for grade VII economic activities suitable for students and teachers. Through a series of media development processes, it was found that the development of interactive learning media based on Articulate Storyline 3 in large classes within 3 classes at SMP Negeri 1 Kroya, SMP Masyithoh Kroya and SMP Muhammadiyah 1 Kroya was valid and met the categories of feasibility and effectiveness in use. This is proven by the total eligibility score by students from user data of 10682 (90.30%) from the highest score of 11830 (100%). Then, based on the criteria in the feasibility table according to the Likert scale, the total score of 10682 (90.30%) is in the very feasible category. The total feasibility score by teachers from user data was 634 (90.57%), with the highest score being 700 (100%). Then, based on the criteria in the eligibility table according to the Likert scale, the total score was 634 (90.57%) in the beautiful category. According to the results of the success indicators from the pretest and posttest, which were obtained at 89.01%, learning using Articulate Stroyline 3 learning media meets the effectiveness criteria and is very suitable for use as Articulate Stroyline 3 learning media in social studies subjects.

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