



Interactive Media Application of Articulate Storyline 3 in Information Services with the Topic of Self-Regulation for Students of SMP Negeri 1 Percut Sei Tuan

Abdul Munir¹, Rafael Lisinus Ginting², Nur Izharini³

^{1,2,3}Faculty of Education Science, Universitas Negeri Medan, Indonesia

Abstract: *This study aims to develop interactive media using the Articulate Storyline 3 software in information services for students of SMP Negeri 1 Percut Sei Tuan with a focus on the topic of self-regulation in learning. This type of research is research and development. This study uses a 4-D development model, which consists of 4 main steps, namely: Define, Design, Develop, and Disseminate. Data collection techniques in this development research use interviews, observations and questionnaires. The data analysis technique for this study is in the form of qualitative descriptive data analysis and quantitative descriptive data analysis. The results of the validation test with material expert validation of 3.63, media expert validation of 3.83, field practitioner validation of 3.93 with the overall categorized as "Very Valid" so that it is worthy of use. In the practicality test through the student response sheet, 94% were categorized as "Very Practical". In the effectiveness test through student worksheet, the results were 95% with the category of "Very Effective". Thus, overall it can be concluded that the interactive media Articulate Storyline 3 with the topic of self-regulation in learning developed is valid, practical and effective.*

Keywords: *Interactive Media, Service Information, Articulate Storyline 3, Self-regulation in Learning*

I. Introduction

Guidance and Counseling Services follow the development of information and communication technology. The advancement of information and communication technology makes it easier for teachers to carry out guidance and counseling services in schools (Ifdil & Ardi, 2013). Guidance and counseling service media are everything that can be used to convey information and messages from teachers to clients so that they can stimulate their minds.

The media used in the implementation of guidance and counseling services are useful for overcoming various limitations of student experience, helping to educate participants so that the control class is able to develop direct interaction between students and the environment, producing uniformity of observation results, instilling a positive self-concept, creating interest in learning, and stimulating learning in students (Manurung, 2016).

Based on the statement above, teachers are expected to be able to master the use of technology media in implementing guidance and counseling services in schools. The implementation of guidance and counseling services carried out by guidance and counseling teachers is guided by the development aspects listed in the Student Independence Competency Standards (SKKPD) compiled by the Indonesian Guidance and Counseling Association (ABKIN). The Student Independence Competency Standards outline 10 aspects of development that must be achieved by students at the junior high school/equivalent level. One aspect that must be achieved is intellectual maturity. Students must be able to make decisions in dealing with problems in the right way. Good intellectual maturity is supported by good self-regulation.

Self-regulation in learning is a factor that must be done in achieving optimal learning outcomes. This question involves students' ability to manage study time independently, choose activities that support academic achievement, and plan learning strategies with incomplete answers. However, there are also students who show irresponsible behavior, low enthusiasm for learning, and increasing cases of violations. This behavior is caused by low self-regulation or individual self-management. Students who are unable to take responsibility will show an inability to make a regular study schedule, do not complete assignments on time, are not active and participatory in the learning process in class, and do not have a clear future plan.

Self-regulation emphasizes students' ability to control their thoughts, feelings, and behavior in order to achieve desired goals. The main objective in the guidance and counseling process is to develop students' potential and ability to learn independently. Therefore, students must be able to regulate themselves in the learning process (Latipah, 2010). One of the guidance and counseling services that will be provided to students to improve self-regulation in learning is information services. Prayitno & Amti (2004) argue that information services are services that provide understanding and information to individuals regarding the things students need in achieving their desired goals. For this reason, information services are provided to students who need information in dealing with the dynamics of life rationally and realistically. One method used is the use of media based on Articulate Storyline 3. Storyline articulation media 3 is software used to create interactive learning media both visually and audio. Audio-visual learning media for students involves more intensive use of the senses in absorbing material and information (Yunita & Wahyudi, 2021).

According to Amiroh (2020) Articulate Storyline 3 is one of the multimedia devices used to create interactive learning media with various content in the form of text, sound, images, animations, graphics, and videos. Where, the results of the storyline articulated in Articulate Storyline 3 are in the form of web-based media (html) or applications on various devices such as laptops, tablets, and smartphones. The advantage of Articulate Storyline 3 is that it makes it easy for users to operate it, because this media has several similarities with Microsoft PowerPoint. This software excels in producing interesting interactive media because it has a number of feature menus that are useful for adding quiz learning. The use of this media aims to provide convenience for students and teachers in delivering material effectively, so that students are able to understand the material well. Products from Articulate Storyline 3 can be published in various output formats.

II. Research Methods

This study uses a research and development approach. The learning approach using the 4D model was developed by Thiagarajan (Mulyatiningsih, 2014). The 4D model is a product development model consisting of 4 stages, namely: Define, Design, Develop, and Disseminate. The following is a diagram of the 4D model in the research and development (R&D) approach, namely:

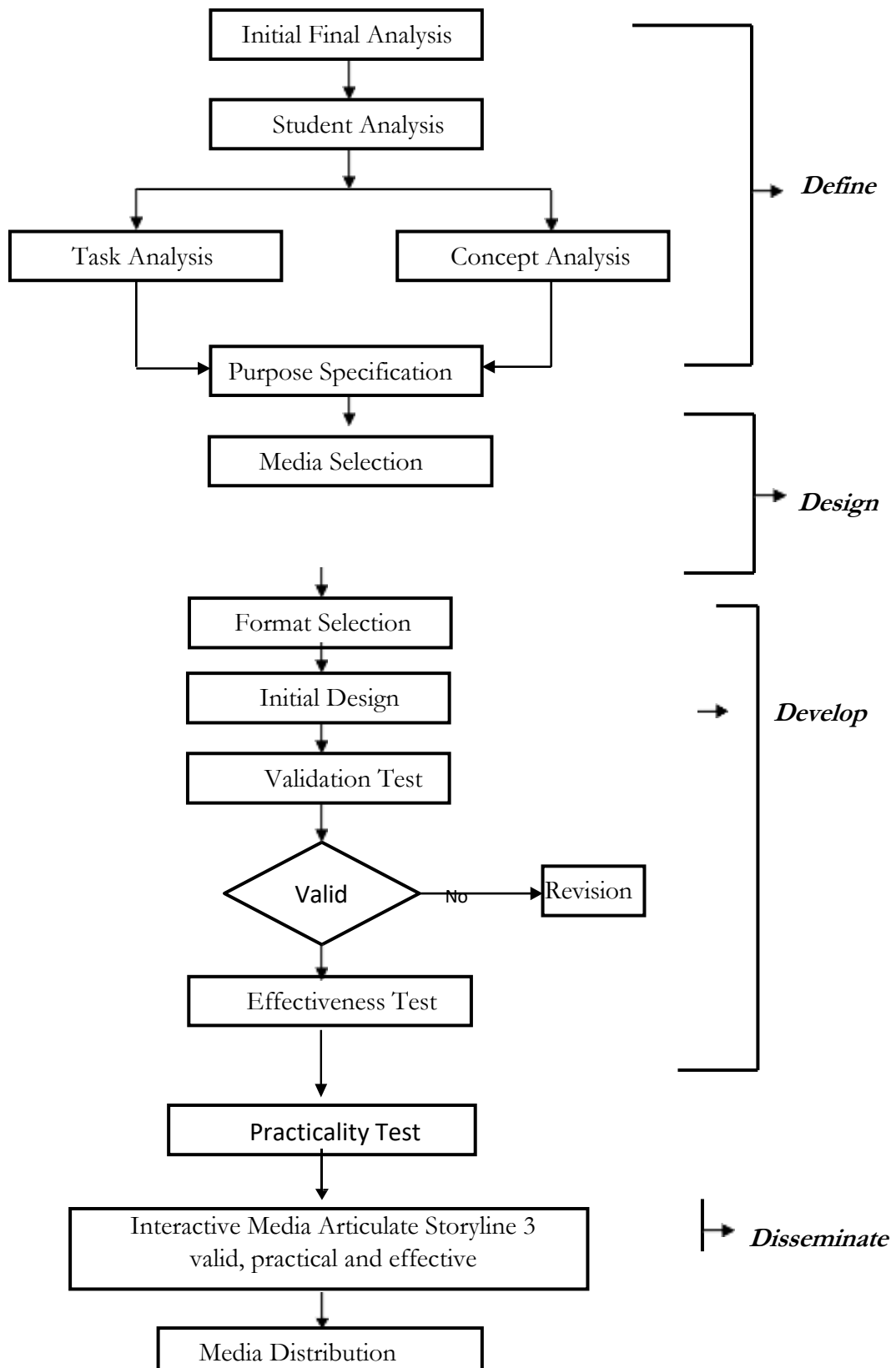


Figure 1. 4D Model

III. Results and Discussion

3.1 Define Stage

a. Initial – Final Analysis

The initial to final analysis stage is useful for finding the causes of problems experienced by individuals through the process of determining the development media needed. Problem analysis aims to find out the description of conditions that occur in the field. Information search through the interview process with guidance and counseling teachers at SMP Negeri 1 Percut Sei Tuan. Regarding the results of interviews conducted with guidance and counseling teachers at SMP Negeri 1 Percut Sei Tuan that the implementation of information services uses the lecture method, one of the guidance and counseling teachers said that, "the method of providing guidance and counseling services in this school often uses the lecture method" (JH, interview, March 6, 2023).

Based on the results of initial observations, the researcher also found that the provision of guidance and counseling services used the lecture method which can be observed in the following image presentation:



Figure 2. Lecture method learning atmosphere

The use of media in guidance and counseling services has been done before, but only in the form of making posters. Service provision counseling guidance supported by adequate facilities with the availability of rooms and special implementation schedules. However, researchers feel that the facilities used are still in the inadequate category. This is because researchers feel that schools are not utilizing technological advances, such as the limited use of infocus. During the implementation of the service, guidance and counseling teachers found several problems, including low student self-management in learning, students not listening and paying attention to teachers when teaching in class, students not completing assignments given by teachers, students causing disturbances during the learning process.

b. Student Analysis

Student analysis is useful for identifying student character as research subjects. Based on the results of interviews conducted with guidance and counseling teachers, it shows a low level of student self-regulation in learning. This statement is in line with the information put forward by the guidance and counseling teacher that, "Students at SMP Negeri 1 Percut Sei Tuan have low learning abilities, students also have difficulty in regulating themselves, there are students who do not listen to the teacher during the learning process, students also do not do the assignments given by the teacher, students are not conducive during the learning process" (JH, interview, March 6, 2023).

Based on the results of initial observations that students' self-regulation is still in the low category. This is in accordance with the findings of the research results that there are some students who do not do homework, do not bring stationery, passive discussion activities, come late, are often absent or absent from class, and there are students who do not take notes on lesson materials. In addition, some students do not make good use of their study time such as delaying assignments, ignoring teacher orders, and students do not take the initiative in doing assignments. However, some students show quite good performance by seeking information from other study sources, namely through smartphone usage behavior.



Figure 3. Smartphone usage behavior

c. Task Analysis

This stage emphasizes that students are able to master a number of main tasks in the form of core competencies and basic competencies. The following is a description of core competencies and competency bases at the task analysis stage, namely:

1. Core Competencies

- a) Students can study the learning regulations that exist in themselves.
- b) Students can formulate specific and orderly learning objectives.
- c) Students can design self-regulation strategies in their own learning.

2. Basic Competencies

- a) Students are able to examine self-regulation in learning through knowledge related to a person's strengths and weaknesses in learning.
- b) Students are able to formulate learning objectives specifically and regularly by preparing a study schedule.
- c) Students are able to design strategies to participate actively and effectively in the learning process, including group discussions and joint projects.

Based on the description that has been put forward previously, the main task that students must master is the ability to assess self-regulation, formulate specific and measurable learning objectives, and design effective learning strategies.

Regarding the statement, the guidance and counseling teacher said the following: "I agree that there are three main tasks that students must master to achieve the established competencies. Because, the implementation of the learning process is centered on students. Where, students are expected to be able to understand the material presented in depth, which is a very important task to help students achieve optimal learning outcomes" (SHL, interview, March 7, 2023).

By controlling the main tasks that have been explained previously, students will be able to organize and direct their learning goals optimally.

d. Concept Analysis

Concept analysis stage is the main step in formulating the objectives of developing interactive media products. The concept analysis stage aims to compile the contents of the material related to interactive media for the Articulate Storyline 3. This statement is in line with the results of the interview conveyed by the guidance and counseling teacher that, "the steps of concept analysis are to explain the meaning of self-regulation in learning, the goals and characteristics of self-regulation in learning, factors that influence self-regulation in learning, and self-regulation strategies in learning" (SHL, interview, March 7, 2023).

The following are the stages of the analysis design that will be used in learning, namely: 1) understanding self-regulation in learning, 2) the goals of self-regulation in learning, 3) characteristics of self-regulation in learning, 4) factors that influence self-regulation in learning, and 5) self-regulation strategies in learning.

e. Formulation of Learning Objectives

The implementation of this stage is done through writing service objectives to find out the expected behavioral changes. This is used as a basis for researchers in planning and designing learning devices that will be integrated into the learning device material.

Based on the interview results obtained from guidance and counseling teachers, namely as follows: "The implementation of services is useful for obtaining learning objectives about the concept of self-regulation in learning. Because, you will use media as a new experience in learning. This is part of the purpose of the service" (SHL, interview, March 7, 2023).

The objectives of implementing this service are:

- 1) Improve students' knowledge to create their own basic rules in learning.
- 2) Providing learning experiences using interactive media based on the articulation of story lines 3 about students.

3.2 Design Stage

Design stage aims to design the arrangement of equipment. Media selection of this stage is useful for identifying media that is appropriate for the use of the device. Various media that support the design of this product are:

1. Laptop

Laptops play an important role in product design. Because, laptops function as the main device used by software in the form of Articulate Storyline 3.

2. Articulate Storyline 3

Articulate Storyline 3 functions as the main media in creating interactive media products that contain a combination of text, sound, animation, images, graphics, video, and others.



Figure 4. Articulate Storyline 3 Display

3. Canva

Canva functions as a graphic design platform that provides various elements in the form of animation support to produce a better and more attractive appearance.



Figure 5. Canva Display

4. Netflix

Netflix serves as an online web hosting platform after the launch of its interactive media product Articulate Storyline 3 by generating online HTML5 files.



Figure 6. Netflix Display

5. Google Chrome

Google Chrome functions as a browser to access media on websites.



Figure 7. Google Chrome Display

a. Format Selection

Researchers design media content by combining text, images, audio, video, or live quizzes using Articulate Storyline 3 software. However, Articulate Storyline 3 has limited animation availability. So researchers decided to use the help of an application in the form of canva as a choice of animated characters. The selection of service formats is determined based on the service implementation plan in the form of an information service format using experiential learning methods. Experiential learning is a way of learning that emphasizes direct experience through the process of remembering. Students will be able to carry out the learning process well when they try, feel, and understand concepts directly. There are several stages that can be carried out in experiential learning, namely:

1. Concrete experience stage

At this stage, the guidance and counseling teacher can start a discussion about the educational experience of the learning participants. Then, the guidance and counseling teacher asks students to share their learning experiences directly. Where, the teacher will provide a video of relaxation to students. Furthermore, students are asked to provide responses to the video.

2. Reflective experience stage

This stage provides an opportunity for students to form small groups. It is expected that students are able to understand the reflection journal optimally. Where, students are asked to reflect on their experiences. This involves questions such as "what have I learned today?", "what do I like and dislike when studying?", "What obstacles do I face?" and "What solutions can I provide?"

3. Abstract conceptualization stage

At this stage, students will consider several techniques that can help carry out services systematically. Then, students will plan what steps they want to take in evaluating their learning skills.

4. Active trial phase

This stage is the final stage in the development of interactive media. Where, this stage involves the implementation of ideas and strategies learned from learning experiences into real learning situations. Students are encouraged to create action plans to improve self-regulation in learning. Various types of strategies can be applied to each group discussion, namely: mind mapping, making a study schedule, giving various rewards and punishments, making a reflection journal, and trying the Cornell method.

b. Initial Design

Articulate Storyline 3 device is designed according to the selected format. The initial product design steps (version I) are:

1. Making a flow chart

The initial media design begins with the creation of a flowchart. A flowchart is a chart that explains the process flow in the development media that is useful for visualizing the workflow of learning media. The flow chart of learning media can be seen on the initial display when opening a new project of Articulate Storyline 3 called the story display. The researcher developed a flow chart that was arranged into 7 display, namely: entry display, menu display, instructions display, KI & KD display, materials display, quizzes, and developer profiles display. The display is filled with several slides and also several layers as Supporters of Content in Structural Media. The form of the flowchart display that has been created by the researcher can be seen in the image below:



Figure 8. Flow chart display

2. Designing content

The content media contains a view that contains a number of slides and supports layers. The display is divided into the following sections:

a) Entry display

This display contains the initial page to fill in the name and class before entering the next page.



Figure 9. Entry Display

b) Menu display

Menu display provides various buttons to move slides. The next slide contains instructions for use, core competency and basic competency information, material explanations, quizzes, and developer profile information.



Figure 10. Menu Display

c) Instructions Display

Instructions Display contains information on how to use the buttons on each slide to make it easier for users to understand the function of each button icon.



Figure 11. Instructions Display

d) KI & KD Display

This display contains information about learning objectives that include core competencies and basic competencies that students must master by providing clear guidelines during the learning process.



Figure 12. KI & KD display

e) Materials Display

The display contains information services in guidance and counseling with the topic of self-regulation in learning. When the user presses the Display menu material, the user is directed to the Display material. Before the user finds the choice of self-regulation material in learning, the slide display first contains a display of material in the form of information services in guidance. After that, students will be presented with a selection of material slides with the topic of self-regulation in learning in the form of stages of learning methods based on experience.



Figure 13. Material Display

6) Quiz Display

Quiz Display contains several slide quizzes containing 10 questions with true and false answer choices.



Figure 14. Quiz Display

7) Developer profile Display

This display contains information about the media developer's profile. Where, the researcher provides complete description of his/her personal data.



Figure 15. Developer Display

3.3 Develop Stage

The develop stage is a stage carried out to create product development through the following two stages:

a. Validation Results by Material Experts

After the initial product design (version I) was developed, the researcher conducted a product assessment to perfect the product results that had been developed from testing 5 validators, namely, 2 material expert validators, 2 media expert validators, and 1 education practitioner validator (guidance and counseling teacher). Suggestions and responses provided by each validator are useful for product refinement for the sake of perfecting the final product results (version II).

The validation results by material experts show that the development of learning media has gone through an evaluation process by the validator accurately. The following is a

summary of the validation scores given by the validator regarding the material aspect, namely:

Table 1. Average of Validation Results by Material Experts

Aspect Evaluation	Assessment Score	
	Expert Material I	Expert Material II
Content Quality and Objectives	3.75	3.87
Quality instructions	3.42	3.42
Average Score	3.63	
Category	Very Valid	

Based on the validation results presented in table 1, the validation results by material experts obtained an average score of 3.63 with a very valid category. However, in the initial product design (version I) there were several criticisms and suggestions submitted by the experts. Where, these suggestions and criticisms are useful for further product improvement.

The following table contains suggestions and criticisms given by the material expert validator on the initial product design (version I), namely:

Table 2. Criticism and Suggestions by Material Experts Validator

No	Validators Material	Criticism and suggestions
1	Validator 1	1. Simplification of sentences in the material, because the target subject is a junior high school student. 2. The application is a bit slow or loading so you need to pay attention again.
2	Validator 2	1. The material is appropriate and check the grammar used again. 2. Sentences are adjusted to suit student level through the use of positive sentences.

Based on the criticism and suggestions that have been submitted by the material validator in the presentation table above, the researcher made improvements to the material in order to improve the product better. Where, the results of the revision of version I product have an impact on the success of version II product. The description of the revision results is presented in the following table:

Table 3. Revision by Material Expert Validator

NO	Before Revision	After Revision
1	 There are only bullet points with word choices that tend to be difficult for junior high school students to understand, such as "academic performance" and "metacognitive skills."	 The explanations given use simpler sentences with clear delivery adjusted to the learner's level.
2	 Including missing sentences in the form of "Sorry, you failed" can have an impact on student enthusiasm.	 Change the quiz result description into a positive sentence like "great, you gained valuable experience. Let's try again!"

After revisions or improvements were made based on criticism and suggestions from validator material experts so that the final product (version II) is suitable for use as a learning medium in the form of interactive articulation of the 3 media storyline through the application of self-regulation topic information services in learning.

b. Validation Results by Media Experts

The results of media expert validation show that the development of learning media has gone through an evaluation process by validators for instrument validity. The following is a summary of the validation scores given by validators related to media aspects, namely:

Table 4. Average of Validation Results by Media Experts

No	Aspect Assessment	Assessment Score	
		Member Media I	Member Media II
1	Visual clarity	4.00	3.80
2	Facility	4.00	4.00

3	Aesthetics	3.33	3.66
4	Interactive Design	3.66	4.00
5	Consistent	4.00	4.00
Average Score		3.83	
Category		Very Valid	

Based on the validation results presented in the table above, the validation results obtained by material experts were 3.83 with a very valid category. However, the initial product design (version I) received several criticisms and suggestions from experts that were useful for further product improvement. The criticisms and suggestions given by the material expert validator to the initial product design (version I) are presented in the following table

Table 5. Criticism and Suggestions by Media Experts Validator

NO	Media Validator	Criticism and suggestions
1	Validator 1	1. Add an explanation of the material presented 2. Add Image Support
2	Validator 2	1. Core competencies and indicators are adjusted 2. Instructions for use for teachers and students are explained in more detail.

Based on the criticism and suggestions submitted by the media validator in the table above, the researcher revised the learning media in order to perfect the product to the maximum. The process of perfecting version I product has an impact on the results of version II product.

The results of the revision submitted by the validator can be seen in the following table:

Table 6. Revision by Media Expert Validator

NO	Before Revision	After Revision
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1	 Unattractive and lacking appearance explanation of the material presented	 Provide supporting images to give a good and beautiful impression in appearance
		 Provide explanations such as definitions and examples concrete from the material presented
2	The intended competencies are not yet appropriate	 The competencies in question have been adjusted

3	 The instructions for use are only an explanation of each icon used.	 Use of instructions coupled with use for teachers  And the use of instructions for students
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After revisions or improvements were made based on criticism and suggestions from validator material experts so that the final product (version II) is suitable for use as a learning medium in the form of interactive articulation of the 3 media storyline through the application of self-regulation topic information services in learning.

c. Validation Results by field practitioners

The validation results conducted by field practitioners (guidance and counseling teachers) show that the development of learning media has gone through an evaluation process by validators for the sake of media feasibility and validity. The following is a summary of the scores and validation categories conducted by validators on aspect assessments, namely:

Table 7. Average of Validation Results by Field Practitioner

NO	Assessment Aspects	Assessment Score
1.	Content quality and purpose	4.00
2.	Instructional Quality	4.00
3.	Comfort	4.00
4.	Aesthetics	3.50
5.	Interactive Design	4.00
Average Score		3.93
Category		Very Valid

Based on the validation results presented in the previous table, the results of the field practitioner validation were 3.93 with a very valid category. The final product version II was declared feasible as a learning media in the form of interactive articulation of the 3 media storyline through the application of information services with the topic of self-regulation in learning.

d. Development Trial

After the product passed the revision stage by the validator, the researcher then conducted a limited trial on the product (version II) to obtain feedback in the form of student responses who were the target subjects of the research. The purpose of this trial was to obtain practical results and effectiveness results from the media developed by the researcher. The instrument used was the distribution of questionnaires in the form of student response sheets and student worksheets available on the product in the form of interactive quizzes. The product trial was given to 28 students in grades VIII-9 of SMP Negeri 1 Percut Sei Tuan.

1. Practicality test

To test the practicality of the instrument, the researcher distributed a questionnaire in the form of a student response sheet to the subject of learning of 28 students of class VIII-9 of SMP Negeri 1 Percut Sei Tuan. The results of the product practicality test are explained in the table below:

Table 8. Student Response Result Sheet

NO	Student	Aspect							
		Interest In Media			Presentation materials	Appearance		Implementation	
		1	2	3	4	5	6	7	8
1	ANCP	3	4	4	4	4	3	3	4
2	AMU	3	4	4	4	4	3	4	4
3	AP	4	4	4	3	4	4	4	4
4	YES	4	3	4	3	4	3	3	4
5	DNH	4	4	4	4	4	4	4	4
6	DSL	3	4	4	3	4	4	4	4
7	HBB	4	3	4	4	4	4	4	3
8	HZN	3	3	4	4	4	3	3	3
9	THAT	3	4	4	4	4	3	4	4
10	CAF	4	4	3	4	4	3	3	4
11	MFTL	4	4	4	4	4	3	4	4

12	MF	4	4	4	3	4	4	4	4
13	TN	4	4	4	4	4	4	4	4
14	THAT	3	4	3	4	3	4	4	4
15	N	4	4	4	4	4	4	4	4
16	THAT	3	4	4	4	4	3	4	4
17	N	3	3	4	4	4	4	4	3
18	PY	3	4	4	4	4	4	4	4
19	RS	4	4	4	4	4	4	4	3
20	RUN	3	4	4	4	4	4	3	4
21	RCA	4	4	4	4	4	4	4	3
22	SRS	4	4	4	4	4	4	4	4
23	SO	4	4	4	4	4	3	4	3
24	on	4	4	4	4	4	4	4	4
25	SPL	4	3	4	4	4	3	4	4
26	TNP	2	3	3	3	4	2	4	3
27	WSFT	4	4	4	4	4	3	4	4
28	YF	4	4	4	4	4	4	4	4
Amount		100	106	109	107		199	107	105
Percentage				97%	96%		99% 88% 96%		94%
Average		94%			96%	94%		95%	
Average Amount		94%							
Category		Very Practical							

Based on the student response questionnaire analysis table, the results of the calculation of the practicality test on 28 students of class VIII-9 SMP Negeri 1 Percut Sei Tuan obtained an average value of the media interest aspect of 94%, the presentation aspect of 94%, material of 96%, the appearance aspect of 94%, and the implementation aspect of

95%. This shows that the learning media product in the form of interactive media for the Articulate Storyline 3 through the application of information services with the topic of self-regulation in learning obtained an average result of all aspects of 94% or "very practical".

2. Effectiveness Test

The effectiveness test was obtained from the student worksheet available on the product in the form of an interactive quiz. The interactive quiz consists of 10 multiple-choice questions and was filled in by 28 students of grades VIII-9 of SMP Negeri 1 Percut Sei Tuan. The results of the product effectiveness test will be explained in the following table:

Table 9. Student Worksheet

NO	Student	Sign	Max Score	Information
1	ANCP	80	100	Passed
2	AMU	100	100	Passed
3	AP	90	100	Passed
4	YES	100	100	Passed
5	DNH	100	100	Passed
6	DSL	90	100	Passed
7	HBB	100	100	Passed
8	HZN	100	100	Passed
9	THAT	100	100	Passed
10	CAF	80	100	Passed
11	M FTL	100	100	Passed
12	MF	100	100	Passed
13	TN	90	100	Passed
14	THAT	100	100	Passed
15	N	100	100	Passed
16	THAT	80	100	Passed
17	N	90	100	Passed
18	PY	90	100	Passed
19	RS	100	100	Passed

20	RUN	100	100	Passed
21	RCA	100	100	Passed
22	SRS	100	100	Passed
23	SO	80	100	Passed
24	on	100	100	Passed
25	SPL	100	100	Passed
26	TNP	100	100	Passed
27	WSFT	90	100	Passed
28	YF	100	100	Passed
Amount		2660	Category	
P		95	Very Effective	

Sourced from the results sheet of the presentation table of the Educating Work Participants mentioned, so that the results of the effectiveness test on 28 students of class VIII-9 SMP Negeri 1 Percut Sei Tuan obtained a percentage result of 95%. Thus, the learning media product in the form of interactive media for the Articulate Storyline 3 through the application of information services with the topic of self-regulation in learning is categorized as "very effective".

3.4 Disseminate Stage

At this stage, researchers were asked to disseminate the product in a limited manner to the development trial subjects, namely 28 students in grades VIII-9 of SMP Negeri 1 Percut Sei Tuan. Tohirin (2013) stated that the stages of information services consist of the planning stage, the implementation stage, and the evaluation stage. At the implementation stage, researchers tried to use media and methods optimally. Where, the method of implementing information services in this study used an experiential learning method consisting of 4 stages, namely the concrete experience stage, the reflective observation stage, the abstract conceptualization stage, and the active experiment stage. This study used interactive media for the Articulate Storyline 3 packaged on a website and shared via a link. Interactive media products in the form of Articulate Storyline 3 with the topic of self-regulation in learning were given to students through information services with the experiential learning method.

3.5 Discussion

Guidance and counseling services are part of education that implements advances in information and communication technology. The use of technology and information media makes it easier for guidance and counseling teachers (counselors) to provide services to students (Ifdil & Ardi, 2013). Based on the statement above, researchers try to implement information services through the use of interactive media in the form of Articulate Storyline 3.

Interactive media developed in information services with the topic of self-regulation in the use of Study software articulation storyline 3, where the software is useful for creating

interactive learning media with content containing a combination of text, video, audio, sound, images, and supporting quizzes. The results of educating learning participants are obtained from experience and facts in the field (concrete). In addition, participants also educate to obtain learning outcomes through imitation objects and verbal symbols (Trimansyah, 2021).

The development of interactive media for the Articulate Storyline 3 using the 4D model developed by Thiagarajan (Mulyatiningsih, 2014). The 4D model is a product of model development consisting of 4 stages as follows, namely the define stage, design stage, develop stage, and disseminate stage.

At the define stage, researchers identify useful needs to collect information related to the product being developed. The identification process begins with an initial final analysis in the form of student analysis, task analysis, analysis design and formulation of learning objectives. Where, the results of the initial final analysis indicate that the implementation of information services only uses the lecture method. In addition, researchers also found minimal use of technological advances during the implementation of services. Interview techniques conducted with guidance and counseling teachers are useful for revealing problems with student self-regulation in learning. Forms of behavior which reflects the students' low self-esteem.

The rules in learning are lack of academic initiative and responsibility, lack of active involvement in the learning process, and lack of discipline in learning. Then, task analysis regarding core competencies and competency bases. Where, for students it is expectedable to recognize the strengths and weaknesses of learning, formulate specific learning objectives, and design effective learning strategies. Then, the design of the analysis of the collection of material content includes the definition of self-regulation in learning, factors that influence self-regulation in learning, and self-regulation strategies in learning. The learning objectives for students are to increase knowledge about self-regulation and learning experiences through the use of interactive media based on Articulate Storyline 3.

At the design stage, researchers try to choose media, formats, and initial designs. Media selection is useful for identifying the right media to optimize media devices. The media specified in this product is interactive media in the form of Articulate Storyline 3 software. Furthermore, the selection of media formats is based on the service implementation plan in the form of service information formats with experiential learning methods. Where, researchers design media content containing text, images, audio, video, or live quizzes using Articulate Storyline 3 software. In the initial media design, the researcher designed the creation of a flowchart in the form of a chart that explains the process flow in the media. Then, the researcher developed the contents of the flowchart which were arranged into 7 display, namely the entry display, Menu display, Instructions display, KI & KD display, Materials display, Quiz display, Developer profile display. On the display page, the researcher filled in several slides and layers to support the contents of the learning media.

At the develop stage, researchers conducted validation tests, practicality tests, and revisions to produce the final product (version II). Validation tests were conducted by 5 expert validators, namely, 2 material expert validators, 2 media expert validators and 1 education practitioner validator (Guidance and Counseling Teacher). After conducting initial product validation (version I), the researcher made revisions to perfect the product into a final product (version II). Where, the practical test was given to 28 students of class VIII-9 SMP Negeri 1 Percut Sei Tuan.

In the material validation test, there were 2 expert validators to assess the product material consisting of 2 aspects, namely the aspect of content quality and objectives, and the aspect of learning quality. In the quality aspect, there were 8 statement items with an average score of material expert I of 3.75 with the category "very valid" and an average score of material expert II of 3.87 with the category "very valid". Furthermore, in the aspect of learning quality, there were 7 statement items with an average score of material expert I of 3.42 with the category "very valid" and an average score of material expert II of 3.42 with the category "very valid". The average score of the overall aspect was 3.63 with the category "very valid", so that the interactive media developed by the researcher was suitable for use.

In the media validation test, there were 2 expert validators who assessed the product media consisting of 5 aspects, namely visual clarity, ease of use, aesthetics, interactive design, and consistency. The visual clarity aspect contained 5 statement items with an average score of media expert I of 4.00 in the category of "very valid" and an average score of media expert II of 3.80 in the category of "very valid". In the ease aspect, there were 2 statements with an average score of media expert I of 4.00 in the category of "very valid" and an average score of media expert II of 4.00 in the category of "very valid". In the aesthetic aspect, there were 3 statement items with an average score of media expert I of 3.33 in the category of "very valid" and an average score of media expert II of 3.66 in the category of "very valid". In the interactive design aspect, there were 3 statement items with an average score of media expert I of 3.66 in the category of "very valid" and an average score of media expert II of 4.00 in the category of "very valid". In the consistent aspect, there are 2 statement items with an average score of media expert I of 4.00 with the category "very valid" and an average score of media expert II of 4.00 with the category "very valid". The average score of all aspects is 3.83 with the category "very valid", so the interactive media developed by the researcher is valid and suitable for use.

In the field practitioner validation test conducted by guidance and counseling teachers, there are 5 assessment aspects. Where, the aspect of content quality and objectives contains 7 statement items with an average score of 4.00 with the category "very valid", the aspect of learning quality contains 3 statement items with an average score of 4.00 with the category "very valid", the aspect of ease contains 2 statement items with an average score of 4.00 with the category "very valid", the aesthetic aspect contains 2 statement items with an average score of 3.50 with the category "very valid", and the interactive design aspect contains 1 statement item with an average score of 4.00 with the category "very valid". The average value of all aspects is 3.93 with the category "very valid", so that the interactive media developed by the researcher is suitable for use. After conducting a media validation test by expert validators, the researcher made revisions (improvements) in the form of suggestions and comments given by each validator. Revisions that are useful for further product improvement (version II).

Practicality test was given to 28 students of grade VIII-9 of SMP Negeri 1 Percut Sei Tuan. The student response sheet contains 4 assessment aspects, namely media interest aspect, material presentation aspect, display aspect, and implementation aspect. In the media interest aspect, there are 3 statement items with an average score of 94% or "very practical". In the material presentation aspect, there is 1 statement item with an average score of 96% or "very practical". In the display aspect, there are 2 statement items with an average score of 94% or "very practical". In the implementation aspect, there are 2 statement items with an average score of 95% or "very practical". Acquisition The average score of the overall aspect is 94% with the category "very practical", so the interactive media developed by the researcher is practical to use.

The effectiveness test was obtained from the distribution of student worksheets through interactive quizzes on media containing 10 multiple-choice questions. The results of the interactive quiz were 95% with the category "very effective", so that the interactive media provided by the researcher was very effective to use. The Web-based Distribution Stage of the 3-product storyline articulation (html5) that has been uploaded and can be accessed via a link hosted with its help from Netlify. Where, this product can be run on various user devices, both laptops and smartphones. The following is a link that can be accessed to view the 3-product storyline articulation, namely: <https://nurizharni-srl.netlify.app/>. The products that will be distributed to 28 students in grades VIII-9 of SMP Negeri 1 Percut Sei Tuan are limited.

The implementation of information services using interactive media of Articulate Storyline 3 with the topic of self-regulation in learning shows valid, practical, feasible and effective results to be given to students. The advantages of interactive media of Articulate Storyline 3 can adjust the material to the needs and level of understanding of students. In addition, service materials can be accessed flexibly. While the disadvantages of interactive media of Articulate Storyline 3 are that the use of media is still online so it requires a stable network.

IV. Conclusion

1. The implementation of information services using interactive media for Articulate Storyline 3 with the topic of self-regulation in learning using the 4D model developed by Thiagarajan with the following 4 stages: define stage, design stage, develop stage and disseminate stage.
2. The validation test results were carried out by 5 expert validators, namely 2 material expert validators, 2 media expert validators, and 1 education practitioner validator (guidance and counseling teacher). The score obtained by 2 material expert validators was 3.63 with the category "very valid". Then the score obtained from 2 media expert validators was 3.83 with the category "very valid". Then, the score obtained from field practitioners was 3.93 with the category "very valid". Thus, the implementation of information services through the use of interactive media for the Articulate Storyline 3 with the topic of self-regulation in learning is very feasible to use.
3. The practicality test was given to 28 students in grades VIII-9 of SMP Negeri 1 Percut Sei Tuan with an average score of 94% for all aspects in the "very practical" category, so that interactive media is very practical to use.
4. The media effectiveness test was given to 28 students of grade VIII-9 of SMP Negeri 1 Percut Sei Tuan by distributing student worksheet in the form of an interactive quiz. The quiz contains 10 multiple-choice questions with the results of the classical completion percentage of 95% with the category of "very effective", so that the interactive media developed is considered effective for use.

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