# Development of Learning Media Using Articulate Storyline 3 Based on RME Approach to Increase Student's Interest in The Plane Topic at MTSS Al Karomah Berastagi

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*Abstract. The aim of this research is to develop learning media using Articulate Storyline 3 that are valid, practical, and effective to improve students' ability to understand flat plane topics. The study was carried out at MTSS AL KAROMAH BERASTAGI. The subjects of this research were students of class VII-A. This research is research and development (R&D) using the ADDIE Model. The data collection technique uses a questionnaire assessment sheet for material experts, teaching material experts, learning practitioners and student responses. The results showed that learning media using Articulate Storyline 3 obtained an average percentage of 93.47% with the criteria of "very valid" according to the assessment of teaching materials experts and based on media material experts obtained an average percentage of 77.5% with the criteria " very valid". Based on the practice of learning carried out by the mathematics teacher getting 91,4% with the "very practical" criteria. Based on the effectiveness assessment of the 20 students, they got an average percentage of 88.90% with the criteria of "very effective". Thus, based on the results of the assessment of material experts, teaching materials experts, learning practitioners, and student effectiveness it can be said that learning media using Articulate Storyline 3 have been tested as valid, practical and effective for use in learning.*

*Keywords: Development, Articulate Storyline 3, Learning Media, Plane.*

## 1. BACKGROUND

Education is an effort to prepare the younger generation to welcome and face developments in the global era. So education must be implemented as well as possible to produce quality education and increase the quality of human resources. Technological developments have an impact on the field of education. The learning process is also inseparable from the media, methods, and learning outcomes (Nurrita Teni, 2018). Education also needs to take advantage of advances in science and technology to be able to achieve its goals effectively and efficiently.

Media is a means of distributing messages or information in the teaching and learning process to be conveyed by the message source to the target or recipient of the message (Mahnun, 2012). Learning media according to Surayya (2012) is a tool that can help the teaching and learning process and serves to clarify the meaning of the message or information conveyed, so that it can achieve the planned learning objectives. According to Ayuningtyas (2011) that "the purpose of using media in the learning process is to streamline and streamline the learning process".

According to Ismail et al (Hamzah, 2014) mathematics is a science that discusses numbers and calculations, discusses numerical problems, regarding quantity and magnitude, and studies the relationship of patterns, shapes, and structures, means of thinking, collections

of systems, structures, and tools. This means that the object discussed in mathematics is only a problem of numbers, both in the problem of numbers that have value and as a means of solving a problem.

Along with the development of the era of advances in information technology should be able to provide a positive flow to the world of education, if used properly. Especially computer technology and internet technology, both in hardware and software, provide many offers and choices for the world of education in supporting the learning process. The advantages offered not only lie in the speed factor for obtaining information but also in multimedia facilities that can make learning more interesting, visual, and interactive.

One of the learning media is *Articulate Storyline* 3. According to (Amiroh, 2020:2) *Articulate Storyline* 3 is one of the multimedia authoring tools used to create interactive learning media with content in the form of a combination of images, text, sound, graphics, video, and video. animation. According to Pratama (2018), this application is also equipped with superior features such *as timeline, movie, trigger, picture,* and *character,* which are interesting compared to other *software*. This learning media can also be accessed on *Android*, making it easier for teachers and students to continue learning anywhere at any time and is very supportive during this Covid-9 pandemic period this learning media is easily distributed to students in HTML 5 form to students' *Whatsapp*.

## 2. THEORITICAL FRAMEWORK

The word media comes from the Latin word medius which literally means "middle" of intermediaries or messengers from the sender to the recipient of the message (Azhari, 2015). Learning media can be understood as anything that can channel information from information sources to recipients of information (Falahudin, 2014). Learning media as a whole is a tool or material used in the teaching and learning process which has a function as a carrier of information from learning resources.

According to Sumantri (2015) a realistic approach to mathematics will always be associated with reality and mathematics is a human activity. This mathematical reality focuses more on imagining something to make it look real and then it will be observed and imagined. Susanto (2013) also expressed the opinion that this RME approach is a student-oriented approach to mathematics learning, where human and mathematical activities must be connected in real terms and the context of students' daily lives to real learning experiences. Based on the expert opinions that have been described, it can be concluded that the RME approach is a mathematics learning approach that connects human and mathematical activities

to the student's learning experience by being oriented to real things or problems that can be imagined by students.

According to (Amiroh, 2020) *Articulate Storyline* 3 is one of the multimedia authoring tools used to create interactive learning media with content in the form of a combination of images, text, sound, graphics, video, and animation. According to (Arwanda et al., 2020) *Articulate Storyline* is software to help build interactive learning materials. The way to plan an interesting *Articulate Storyline* project is to use all the different tools and elements, either audio or video. To make it feel more interactive, e-learning must be used with *Articulate Storyline* quizzes. Based on the descriptions above, it can be concluded that the *Articulate Storyline* is an application of computer equipment that can be used as a medium for communication and presentation.

## 3. RESEARCH METHODOLOGY

In this study the authors use research and development (*Research and Development* / R & D). According to Sugiyono (2009), *Research And Development* (R&D) is a basic research activity to obtain information on user needs (needs assessment), followed by development activities to produce products and assess the effectiveness of these products. Development research consists of two words, namely research and development. The first activity is conducting research and literature studies to produce a specific product design, and the second activity is development, namely testing the effectiveness, validation of the design that has been made, so that it becomes a tested product and can be utilized by the wider community.

According to Pribadi in Dwipayanti (2013) The application of an innovative learning model that is in accordance with the characteristics of the material and students is thought to be able to assist students in achieving learning outcomes. The ADDIE model was developed as an innovative learning model because it provides a systematic, effective, and efficient learning process that is packaged in learning steps. So it can be said that the ADDIE model is one of the learning models that can be used as a guide to provide a systematic, effective and efficient learning process.

The subjects in this research are media expert lecturers, material expert lecturers, mathematics subject teachers and students of MTSS AL KAROMAH class VII-A. The object of this research is Development Of Learning Media Based On *Articulate Storyline* 3 To Improve Students Ability In Understanding The Topic Of Algebra.

## 4. RESULT AND DISCUSSION

**Analyze**

This analysis is needed to find out to what extent the media is used by teachers in the process of learning mathematics, especially in Plane Topics. Based on interviews with the MTSS AL-KAROMAH BERASTAGI mathematics teacher, students did not participate in the teaching and learning process in class because students' interest in learning was still low, causing students to find it difficult to understand the material. Learning at MTSS AL KAROMAH is still use LKS books, textbooks, and blackboards as a means of delivering material in class.

During the Covid-19 pandemic, students studied online and used Whatsapp and Google Classroom to provide material and then instruct students to complete the exercises given. So that the learning process in class seems monotonous and makes students bored and less interesting. In learning the media still does not use interesting learning media that can be used with students at MTSS AL KAROMAH. Therefore the researcher wants to develop learning media using *Articulate Storyline* 3 on Plane Topics, in which there is material along with audio that is easy to understand along with examples of questions related to plane topics in the hope that with this media, students' learning interest will increase.

**Design**

After carrying out the analysis phase above, at this stage the researcher designed learning media that used the developed articulate stoyline 3. Basic competencies and achievement indicators are adjusted to the teacher's handbook used by the teacher so that learning objectives are achieved properly.

To create media, several applications are needed, namely *Articulate Storyline* 3 and *Canva*. Gather the materials needed for media content from relevant books. The Articulate Storyline application for packaging media, starting from the entry menu, interesting buttons, material achievements, sample questions, student activities and instructions for using the media. In each slide there are buttons that have directions such as their meaning, their properties, the area formula and the circumference formula, examples of questions and their types. The *Canva* application is used to edit images as backgrounds in materials to beautify the appearance and make it more attractive and add supporting icons in the image.

In the design of learning media using RME Approach itself is an approach that provides an overview of mathematics in realistic form with the aim of being easily understood and well imagined. In accordance with the RME approach itself, in the media, things related to the

RME approach are given, namely realistic pictures according to the learning material. Like a chessboard picture for a square shape and so on.

**Development**

The development of this learning media using Articulate Storyline which is accessed via digital in colorful and equipped with image and learning videos. The arrangement of learning media using Articulate Storyline 3 is as follows. After learning media using articulate storyline 3 were developed, the steps taken were validation by experts, in this case by 2 material experts and 2 teaching material experts. The validation process aims to determine the validity of teaching materials. In addition, validation needs to be carried out to find out whether there are revisions that need to be made to improve learning media using this articulate storyline 3. The two teaching material experts got an average percentage of 93.47% and the learning media using *Articulate Storyline* 3 was declared "very valid".

**Implementation**

The implementation phase was carried out in class 7A MTSS AL KAROMAH BERASTAGI in 2 meetings where the first meeting was held on June 14 2022 the researcher made initial observations at the school to see students' needs for learning media and interviewed the teacher regarding the situation at school in the teaching and learning process and the use of media learning and give the questionnaire for cycle I before the student use the learning media Articulate Storyline 3.

Then the second meeting, namely on March 31, 2023 the second meeting in class 7A by distributing digital teaching materials in the form of links to each student usin g their respective smartphones. In learning, students are asked to look at the Articulate Storyline slides within 30 minutes and then are given 45 minutes to work on student activity questions in the articulate storyline which contains the topic of aircraft. then after finishing working on the questions and being given 15 minutes students were asked for their responses or opinions about learning media using articulate storyline 3 by filling out the student response questionnaire given.

The total number of students participating was 20 students. after the questionnaire was filled out by 20 students with 4 assessment points to determine the effectiveness of learning media using articulate storyline 3 it was declared "very effective" with a value of 88.90%. After being analyzed, cycle 1 gets the percentage per indicator, namely on the first indicator, namely good feeling with a percentage of 61%, student involvement indicator 60.4%, interest indicator 59.4% and indicator 58.33%. In cycle II, the percentage of good feeling indicators

was 86.42%, student involvement indicators were 82.4%, interest indicators were 84.4% and attention indicators were 87.66%.

**Table 1. Percentage of Student Interest Indicator**

| Indicator | Cycle I | Cycle II |
|---|---|---|
| Good Feeling | 61% | 86,42% |
| Student Involvment | 60,4% | 82,4% |
| Interest | 59,4% | 84,4% |
| Attention | 58,33% | 87,66% |

It can be seen from the table above that there is an increase from cycle I and cycle II, namely the first indicator with a percentage of 25.44%, the second indicator is 22%, the third indicator is 25% and the last indicator is 29.33%.

**Table 2. Percentage of Improvement Student Interest Indicator**

| Indicator | Percentage |
|---|---|
| Good Feeling | 25,44% |
| Student Involvment | 22% |
| Interest | 25% |
| Attention | 29,33% |

From the first cycle of giving questionnaires and the second cycle, the average of the first cycle is 59.78% and the average of the second cycle is 85.22%, the difference between the two cycles and can be expressed as an increase in student learning interest is 34.27 %

**Table 3. Percentage of Average Student Interest Indicator**

| Cycle | Average percentage |
|---|---|
| I | 59,78% |
| II | 85,22% |

**Evaluation**

Based on the results of the implementation that was carried out by 20 students, the percentage of results was 88.90% with the criteria of "Very Effective" and from the questionnaire the interest of student have a improvement from cycle I is 59,78%  with four indicator. The first indicator is good feeling with 61%, the second indicator is student involvement with 60,4%, the third indicator is interest with 59,4% and the last indicator is attention with 58,33%. cycle II have a average percentage  is 85,22% with four indicator the

first indicator is good feeling with 86,42% the second indicator with 82,4% the third indicator with 84,4% and the last indicator with 87,66%. The improvement percentage is 34,27%. The learning media using Articulate Storyline can increase the student interest on Plane Topic.

## 5. CONCLUSION AND SUGGESTION

**Conclusion**

The conclusions that can be obtained from the research results are as follows :

1. The learning media using Articulate Storyline 3 on plane topic that has been developed is declared "valid" by validator with a percentage of 85,48%.

2. Learning media using Articulate Storyline 3 on the topic plane that has been developed can increase student interest with a percentage of 34.27%

3. The learning media using Articulate Storyline 3 on plane topic that has been developed is declared "practical" by learning practitioners with a percentage of 91,4%.

4. The learning media using Articulate Storyline 3 on plane topic that has been developed is declared "effective" by student assessment with a percentage of 88,90%.

**Suggestion**

The conclusions that can be obtained from the research results are as follows :

1. For students, in order to use the learning media using Articulate Storyline 3 to increase student interest on plane topics.

2. For mathematics teachers, in order to make a learning media using Articulate Storyline 3 that has been developed as an alternative teaching material so as to increase student interest on plane topics.

3. For other researchers, the learning media using Articulate Storyline 3 that has been developed can be used as consideration for making media learning using Articulate Storyline with different topics.

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