# Message Design Animation In Elearning To Stimulate Students To Design Messages Using Technology

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***Abstract***
*This research is research and development by utilizing animation in e-learning to form new knowledge for students. In addition to knowledge, this research also develops students' skills in designing messages using technology. The results are in the form of videos, animations and blogs, these are the results of the use of ADDIE research and development designs. The ADDIE model is oriented to the competition and conditional audience. The competency results showed that the attendance of 30 students showed an average of 82%, assignments 76%, formative evaluation 82%, summative evaluation 86%, making papers 72%, discussion 88%, work results 86%, and presentations 82%. The ADDIE model also offers validation of the animation media used. The 3 validators showed that the categories were good for 1) The attractiveness and clarity of the message, 2) it was easy to understand both visually and auditory, 3) both the message relevance (systematic and structured). The reason this research was applied is that the use of animation is also used to support the presentation of teaching materials where during the pandemic, bold learning is applied. The use of animation is a lesson plan which is then continued with face-to-face learning with schynchronous zoom integrated with the Moodle application. The summative and formative scoring system uses a google form that is connected to Moodle using a link. In this study also assess the material from the animation of 3 validators in the form of story boards. The average results of the use of messages have a valid and contextual theoretical basis keywords.*

***Keywords:*** *Message Design, Animation, Elearning, Competence*

## I. INTRODUCTION

During the COVID-19 pandemic, there was a shift in the traditional or offline learning system to online or what is often known as e-learning. These changes encourage the use of information and communication technology as a source of learning and the presentation of messages as a solution in learning. Whereas in traditional learning, according to cognitive theory, learning is used as a means of delivering messages from the source of the message to the recipient of the message. Through the use of technology, it is hoped that it can be a solution and fulfill students' learning needs.In e-learning, students are generally required to be independent. Learners learn from materials which are learning resources. This will be bad if learning is not designed properly. The learning design process or known as the learning management system needs to be designed so that it can meet the learning styles of students The learning styles of students are varied starting from visual, auditory and kinesthetic. Children with visual learning styles are more likely to see educators when teaching, while during a pandemic it tends to be out of focus when meeting virtually, so other efforts are needed in the form of learning designs with e-learning learning systems using animation so that students can actively interact. Animation can also provoke other students who have different learning styles such as auditory and kinesthetic to interact in learning. Learners with auditory learning styles tend to prefer to receive information from sound, with animation in the form of images and sounds can provoke students to be active in learning and other learning styles.The concept of learning itself emphasizes the interaction between learning resources, educators and students.

According to Mustaji (2016:70) in (Hendra Wicaksono, Mustaji, Retno Danu. (2019: 157) Explaining) Learning is an activity that involves students and teachers using various learning resources both in classroom situations and outside.With the animation can support the role of educators in conveying messages or interacting with students visually. In addition, animation is also a source of learning for students in learning and understanding the material from educators. In the Elementary School Teacher Study Program and the Early Childhood Teacher Education Study Program, students are able to use various facilities from various technologies such as zoom, google meet, google form, google drive and others. The use of these facilities supports the implementation of the learning process in the pandemic era By using various kinds of

facilities in the era of the COVID-19 pandemic, it is sufficient to support the implementation of learning, but there are several weaknesses, namely learning cannot be accessed repeatedly, although this can be done using record facilities that use large and expensive internet quotas. And learning from beginning to end cannot be accessed by interface, meaning that on one screen, it needs to require several tabs to access it. This results in the concentration of learning that is carried out in a structured and systematic manner. So that help is needed so that learning can be accessed through an interface, light when accessed and can be done repeatedly. Animation is an application that can appear on one page and can be used to explain learning material and can be repeated as needed.Weaknesses in learning in the pandemic era, namely the determinant of learning success lies in the students. Students are encouraged to study independently and access as needed. As a result, the behavior that occurs in various students is that some only follow learning, some do not concentrate on learning. This raises the question of whether students can remember and understand the material, while the ability to remember students varies, there are long-term memory and short-term memory, meaning that students only remember the material at a certain time limit.

This has an impact on learning achievement and learning outcomes in understanding the material. So it is necessary to design the material so that the material can be accessed repeatedly. Some of these facilities are using an e-learning learning system with the help of animation The use of animation follows the systematics of material and competency maps in e-learning so that students can learn independently with a conceptualized learning system. The animation used in this study uses a fairly simple animation with the achievement of the material. The use of animation to explain and encourage students' motivation to learn online. Animation is often considered a spectacle that can be linked or considered as a spectacle that can entertain students In e-learning lessons the learning setting can contain a wide variety of learning resources. This makes e-learning effective. The use of animation in e-learning aims to make effective learning in learning resources used in explaining a material. And the use of animation makes it easier for students to access material with a fairly affordable quota. And make the e-learning system more structured and systematic. With these advantages, the researchers determined the title of the research on the strategy of using animation in e-learning in supporting educators in presenting learning messages E-learning is learning that focuses on the use of information and communication technology. According to William 2007 (in Budi, and Brian, 2012:103) the e-learning method (online course content) provides convenience and smooth teaching and learning processes for both students and lecturers. The use of e-learning that uses information and communication technology facilities of course requires services such as domains, hosting in organizing a learning management system.

The need for these facilities is the primary thing to organize or create an online learning system.The e-learning system is inseparable from the curriculum, the use of the syllabus and the semester learning plan. The difference between traditional learning and online learning lies in the use of the internet network and students are required to study independently. In online learning, students are required to be independent and get the material that has been planned on a page. Measurement of students lies in independence, motivation and level of understanding of the material. All lecture material is stored in a link called documents and a collection of online exam questions is stored in a practice link (Budi & Brian, 2012: 107) Animation is one of the innovations of technology in supporting materials in e-learning. According to Mayer and Moreno (2012, p 88) (in Kadek S, and Sukino, 2013:129) argued that animation is the most interesting form of pictorial presentation in the form of moving image stimulation that describes the displacement or movement of an object. Animation has long been used in the world of education for learning purposes. Its use is often used to attract the attention of students. Also added by Aksoy (2012) in a scientific research journal entitled The effect of animation technique on the 7 grade science and technology course stated that the animation method was more effective than traditional teaching methods in improving student learning outcomes.Learning outcomes and learning motivation in e-learning are still not measurable. With the animation in the form of images and sounds, it is expected to make the message more interesting so that it can increase motivation. The existence of animation in learning can be used as a message design and complement in the presentation of material. Students are also easy to learn the material with the animation in the learning process.Learning outcomes and learning motivation in e-learning are still not measurable.

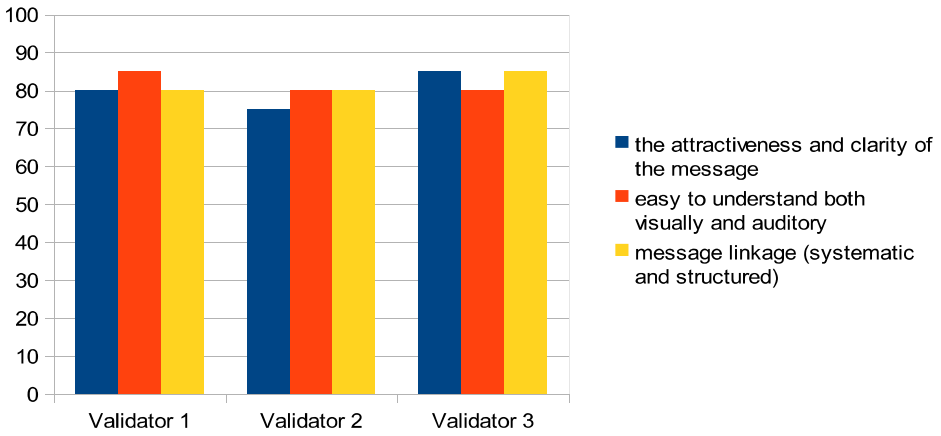
With the animation in the form of images and sounds, it is expected to make the message more interesting so that it can increase motivation. The existence of animation in learning can be used as a message design and complement in the presentation of material. Students are also easy to learn the material with the animation in the learning process.The role of animation in this case as a medium of learning which is a source of learning. According to Duffy and Jonassen (in 2015: 127) said that the use of various learning resources is an effort to solve learning problems. According to (Ani Cahyadi, 2018:6) Later, along with the development of educational technology, learning resources were identified as: messages, people, materials, devices, techniques and settings (Alan Januszwski, 2001: 84) in (Ani Cahyadi, 2018:6) . The learning resources are identified as messages, people, materials, tools, techniques, and settings. Furthermore, according to Azhar Arsyad (2006, p26) learning media can increase and direct the attention of students, so that it can lead to learning motivation, more interaction takes place between students and their environment, and students learn on their own according to their abilities and interests. While in e-learning, students learn independently and various materials have been provided.According to Wenny and Djibran (2018: 72) students are adults whose ages are in the 18-25 year age range. The demands and tasks of individual development, namely physical, psychological and social. Students at an adult age are required to solve problems and assignments.

This is in accordance with Havighurst's opinion (In Wenny & Djibran, 2018: 73) namely developmental tasks are tasks that must be completed. Individuals are in certain phases or periods of life and if they succeed in achieving them, they will be happy, but on the contrary, if they fail, they will be disappointed and criticized by their parents or society and subsequent developments will fail.Students as students in the world of lectures are required to carry out various kinds of activities, both soft skills and hard skills. In e-learning, students are required to listen to the lecturer's explanation via zoom or other, study teaching materials, complete assignments and take quizzes. In these activities, interactions occur, namely students and lecturers, students with learning media-based learning systems when using animation.E-learning learning activities can be carried out in two modes, namely apart from face-to-face with lecturers and only using an animation-based learning management system and face-to-face in a network supported by a learning management system. The selection of this learning process is based on the adequacy of the material to be achieved by students. The adequacy of the material is based on how education designs learning. According to I Nyoman Sudana Degeng (1993) in (Munastiwi, 2020:134) states that there are a number of factors that teachers need to consider in making learning media, namely (1) instructional objectives, (2) effectiveness, (3) students, (4) availability, (5) procurement costs, and (6) technical quality. In addition, in the manufacture of media, things that must also be considered are (1) learning objectives, (2) the effectiveness of the media, (3) the ability of students, (4) the availability of facilities and infrastructure, (5) the quality of the media, (6) cost, (7) flexibility, and (8) the ability to use it and the available time allocation

## II. METHODS

Research development with type utility using the ADDIE design begins with an analysis of the audience and characteristics. The audience in this study is students with the characteristics of being able to build their own and new knowledge from the animation that will be presented. Followed by the identification of the knowledge and behavior produced, in this case they can be sent messages in various forms using technology. This is because the development of technology is developing so fast. As a transfer of knowledge a learning material. Taking into account the different learning styles of students, both visual, auditory and audio-visual.At the design stage, the selection of learning objectives is carried out, namely students can manipulate messages from the physical form of traditional text messages to text form using various media and technology and in the form of visual displays which are the contents of animation. Furthermore, the measurement of message design was carried out using the instrument 1) the attractiveness and clarity of the message, 2) it was easy to understand both visual and audio, 3) the linkage of the message (systematic and structured). The results are presented in the following ffigur.

**Table 1.** Validation of Animation




The use of practice questions and assignments to measure knowledge and skills that are the result of learning using animation. The use of animation is expected to stimulate students in designing messages in the form of various media.Learning in research uses e-learning learning so that animation is presented in e-learning on message design materials. The material in the animation can be seen in the following storyboard

**Table 2.** Storyboard of Animation

| Step of Message | Design of Message | Validation of message in Animation |
|---|---|---|
| Step 1 |   | Validator 1 Very Good<br>Validator 2 Good<br>Validator 3 Good |
| Step 2 |   | Validator 1 Good<br>Validator 2 Good<br>Validator 3 Good |

| | | |
|---|---|---|
| Step 3 |  | Validator 1 Good<br>Validator 2 Enough Good<br>Validator 3 Good |
| Step 4 |  | Validator 1 Good<br>Validator 2 Very Good<br>Validator 3 Good |
| Step 5 |  | Validator 1 Good<br>Validator 2 Good<br>Validator 3 Good |
| Step 6 |  | Validator 1 Very Good<br>Validator 2 Good<br>Validator 3 Good |

| | | |
|---|---|---|
| Step 7 |  | Validator 1 Low<br>Validator 2 Low<br>Validator 3 Good |
| Notes :<br>Validator 1<br><br>Validator 2<br>Validator 3 | Gambar dan suara sudah dapat dijadikan pengantar dalam menjelaskan materi<br>Pemilihan gambar dalam ketegori Cukup<br>Gambar dan sudah mampu menjelaskan namun kecukupan materi masih terbilang kurang, namun dalam kategori baik dengan sumber yang valid | |

The development stage is used to review the results of what was developed based on the goals and designs. At the design stage, a story board is displayed which is used as an introduction to education in explaining message design material using animation. The initial purpose of the material is that students will be able to engineer the physical form of the message into the form of media and learning resources using technology. Students are also expected to be skilled in using technology in designing learning. Based on the assessment of the storyboard validator at the design stage, the average score was good using a rating scale (Very Good, Good, Enough, Less, Very Poor), so that at the development stage no improvement was needed because it was only an introduction to online lectures, then the material was explained by the educator. in more detail using the face to face application.

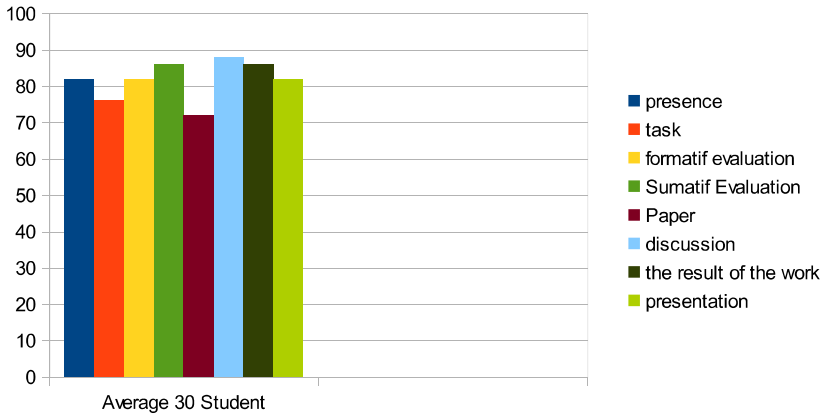
**Design methods**

The method used in this study is research and development with the by-utility type in the sense of utilizing an application or feature to design and develop a product in the form of an e-learning learning system with animation. Utilization of a product is based on the analysis of deficiencies in the use of facilities in e-learning. The design of development research begins with the need for a product, so in this study using a research and development research design from ADDIE with the analyze, design, development, implementation and evaluation stages.

**Fig 1.** ADDIE Model


The analyze stage is the stage to find out what needs are needed to meet the competency needs, the facilities used and the impact of using the facilities on competence. The second stage, namely design, is used to design the sequence in the e-learning system. While the third stage of development is used to meet the needs that are lacking in the analyze stage. The implementation stage is used to determine the application of

design and development to a learning system using animation. And the evaluation stage is used to evaluate from the first stage to the stage of implementing the e-learning system.




**Findings and Discussion**

The implementation stage shows that the presence of students in participating in online lectures begins to read learning objectives, see animations and answer quizzes and assignments/practice questions quite well. At the implementation stage, students can even produce animations, blogs and videos in message engineering. The group assessment is also in the good category, because students design media in groups with the division of tasks. Based on the work of students, they have been able to explain the material well and uploaded it on youtube so it can be said that the implementation of learning is going well with optimal results. This can be seen on a blog created by students with the title Information and Communication Technology subject for Elementary School Learning.At the evaluation stage, it was found that several notes such as slide animation were lacking in terms of number. It is known that the percentage of summative scores from 30 students is depicted in the following diagram with indicators, attendance, assignments, formative evaluation, summative evaluation, papers, discussions, work results, and presentations.At this stage, additional notes are still needed, namely the assessment of the work should be validated by 3 validator experts other than educators. A companion teacher is needed in assessing student attitudes when learning face to face in a schynchronous manner using zoom meeting.Using ADDIE model is oriented to the competition and conditional audience. The competency results showed that the attendance of 30 students showed an average of 82%, assignments 76%, formative evaluation 82%, summative evaluation 86%, making papers 72%, discussion 88%, work results 86%, and presentations 82%. The ADDIE model also offers validation of the animation media used.

The 3 validators showed that the categories were good for 1) The attractiveness and clarity of the message, 2) it was easy to understand both visually and auditory, 3) both the message relevance (systematic and structured).The learning outcomes data are used as guidelines in assessing learning for one meeting. Formative and summative evaluation data is a series of data from meetings using animation, obtained by 1) formative when learning with the e-learning system using animation is complete, questions and answers are made to students about what they have understood after seeing the animation then followed by an explanation of the educator using the face method. to face systematically using zoom meeting. 2) summative evaluation data obtained from the results of assignments, discussions, making papers during e-learning learning using animation and presentations at the end of learning, while data for making papers was obtained at the next meeting. So this research focuses on 1 meeting in learning. From some of the data, it is then synchronized to determine learning outcomes using animation in e-learning and the results show that animation can be used as 1) an introduction so that students have basic knowledge, 2) This is followed by questions and answers from educators to students to find out what they understand, 3) In the next stage educators explain the material along with examples using contextual learning methods, 4) students are divided into several discussion groups to make a work and paper and upload it on youtube or blogs, 5) At the next meeting the educator chooses students to present it as an apperception step in further learning, 6 )

Educators assess the work and assignments through instruments and see presentations from students uploaded on youtube or blogs

## III. CONCLUSION

Based on some of the data displayed in the table, it can be concluded that message design in animation in e-learning can attract students' learning styles 1) Visual, 2) Auditory, 3) Auditory-Visual, with the indicator that animation is an engineered form of message consisting of 1) GIF format images presented on slides that can attract the attention of students' visual learning styles, 2) Text containing basic concepts or theoretical foundations along with their explanations presented on slides that can attract the attention of students' visual learning styles, 3) Selection of attractive templates on slides students' visual learning styles, 4) The combination of words, pictures, templates and sounds arranged in seconds can attract the attention of students' visual auditory learning styles, 5)

Sounds that are adapted to the movement of gif format images. While e-learning in this study serves as a place for learning management or learning management system which starts from 1) the learning objectives are presented, 2) the expected competencies, 3) the learning steps, 4) while the animation is used as an introduction or introduction, 5) the zoom meeting link is used to meet face-to-face online with students, 6) Material in the form of Power Point, 7) Reference in the form of a book that is used as a guide or guide, 8) WhatsApp group link for discussion facilities after getting an explanation from the educator, 9) A series of tasks (making papers and works in the form of videos, animations, multimedia or blog) collected at the next meeting, 10) Closing on the learning step, namely presenting the work for the selected group and uploading it on YouTube, 11) linking the google form for identification of final learning knowledge.

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