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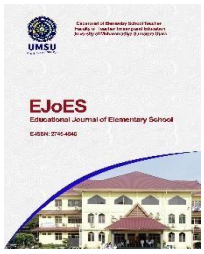

DEVELOPMENT OF INTERACTIVE LINKTREE-BASED ANIMATED VIDEO LEARNING MEDIA ON THEME 3 SUBTHEME 2 DIVERSITY OF LIVING THINGS CLASS IV SDN 106158 PEMATANG JOHAR

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Abstract

The problem researched in this study is the lack of interest in learning and causes low student learning outcomes because teachers only use picture media with conventional teaching in grade IV of SDN 106158 Pematang Johar. The purpose of this study is to produce interactive linktree-based animated video learning media on theme 3 subtheme 2 learning 3 that is feasible, practical, and effective to use. This type of research uses a 4D model that has 4 stages (Define, Design, Development, Dessiminate). The subjects of this study are Grade IV students of SDN 106158 Pematang Johar which totals 30 people. Data collection techniques use interview, questionnaire, test, and documentation techniques. The data obtained were then analyzed using qualitative and quantitative approaches. The results of the research on the development of interactive linktree-based animation video media theme 3 subtheme 2 learning 3, showed that the results of material validation by material expert validators and media validation by media experts obtained a feasibility percentage result of 90% in the "Very Feasible" category. The practicality test by education practitioners obtained a percentage result of 93.3% in the "Very Practical" category. Based on the results of the media effectiveness test, it can be seen that after using the developed media, the average score of students increased from the average start before using media, namely 51.7% of the "Poor" category with the "Incomplete" completeness criterion increased to 90% of the "Very Good" category with the completeness criterion of "Complete", and the results of the students' responses obtained a qualification result of 4.2 in the assessment qualification were categorized as getting a "Good" response to the developed media product. It can be concluded that the interactive linktree-based animation video media developed by the researcher is feasible, practical and effective to be used in Theme 3 Caring for Living Beings Subtheme 2 Diversity of Living Creatures in the Surrounding Learning Environment 3 grade IV SDN 106158 Pematang Johar.

Keywords: Animation Video Media, Interactive Linktree, Theme 3 Subtheme 2 Diversity of Living Beings

1. INTRODUCTION

Education is a conscious effort made by humans to change behavior both individually and in groups for the better through a learning process. Education is a very important aspect of life, through education human beings grow and develop fully. For the implementation of an education, there is a close relationship between teachers and students who influence each other. The relationship between teachers and students is usually carried out in schools. The educational process carried out in schools is a learning activity carried out by teachers and students. In other words, teachers and students must have interaction in the

learning process. Learning activities carried out in schools must be well designed in order to develop the potential of teachers. The purpose of education is to produce human resources and advance the nation. Without education, humans will never progress and will be fooled by the development of the times.

Along with the development of the times, the development of technology and information is developing rapidly, especially in the field of education. In the field of education, various innovations are needed because without innovation, there will be a lag in education. A change that has occurred in the field of education in a better direction than before is a form of innovation.

Therefore, in the field of education, various innovations have been carried out to solve the problems faced, such as improving the quality of education, increasing the effectiveness of education, and equitable distribution of education.

Based on the description above, technological innovation in the world of education must also be considered because many products are produced from the use of technology to improve the quality of education. One of the implementation of technology in the field of education is learning that utilizes ICT (Information Communication and Technology) to create models, media, and learning materials that are interesting for students. Teachers or educators should be able to take advantage of technology in line with the rapid development of technology at this time. One of the uses of technology that can be developed by teachers is to create interactive-based learning media.

Learning media is a tool used by teachers or educators in supporting the success of the learning process. Learning media is the right solution to be used to create fun learning for students, because learning media can arouse students' interest in learning. Effective use of media will help students overcome difficulties, can improve understanding and memory for students. Thus, there will be interaction between teachers and students that can provide changes in the learning process so that the classroom atmosphere will become more active. Teachers must choose the right learning medium because learning media can affect the success or failure of the material delivered. The monotonous selection of learning media will have a bad impact on students. Students will feel bored and not interested in following the learning process. Therefore, teachers must create learning media that is different from the previous learning media. The learning media made must be varied and innovate in accordance with current educational developments, one of which is interactive learning media.

Interactive learning media is a computer-based learning media in which material is presented in the form of text, audio, video, and animation to attract students' interest and attention. Interactive learning media is a component which can be used to support the learning process and can improve the quality of education. Interactive learning media is usually presented in the form of applications, links, and can be accessed by media users.

Based on the results of an interview conducted by the researcher with a grade IV teacher on November 1 at SD Negeri 106158 Pematang Johar, several problems were found as follows: First, the teacher said that he had made learning video media, but the media made was only focused on one subject matter. He said that the students' response was very different, they were more interested in the media that was aired in-focus because the media could be seen and heard. Second, from the observation results, it is known that the acquisition of data on the

learning outcomes of grade IV students of SDN 106158 Pematang Johar in Theme 3 Subtheme 2 Learning 3:

Tabel 1.1 Student Value Learning Outcomes

Mata Pelajaran	Nilai	Jumlah Siswa	Total Siswa	Persentase
IPA	<70	18	30	60%
	70	4		13,3%
	>70	8		26,6%
Bahasa Indonesia	<70	16	30	53,3%
	70	6		20%
	>70	8		26,6%

(Sumber: SDN 106158 Pematang Johar)

Based on the table above, it can be concluded that student learning outcomes in thematic learning are still relatively low, this can be seen from the percentage of students who get scores above 70 in science and Indonesian lessons of the same of 26.6% and the percentage of students who get scores according to the KKM for science lessons of 13.3% and Indonesian by 20%, as well as for the percentage of students who get scores below 70 for science lessons of 60% and language Indonesia at 53.3%. What is indicated to be the cause of low student learning outcomes is that teaching is still often conventional using the lecture method and guided by textbooks only, which makes students bored and decreases interest in learning.

Third, the results of the interview also know that so far the media used by teachers is only printed and usually pasted on the wall or teachers use objects in the surrounding environment that are already available. Fourth, the teacher also said that he had never developed a thematic learning video, a learning video had been made but only focused on one subject matter. Learning videos are made only to be inserted into a youtube link and shown to students. For thematic learning videos, teachers only take learning videos that are already on youtube and then send them to students through whatshapp and are displayed during learning. Time limitations and curriculum demands are factors that make teachers have many tasks to do and lack innovation in developing technology-based learning media.

Fifth, with the current conditions, teachers say that they have not fully used technology-based learning media and have not fully produced technology-based media. It is evident that students during the learning activity process on average do not listen to the teacher's explanations, it seems that there are students who daydream, sleepy, and talk to their friends. So that students are less enthusiastic in learning and answering questions asked by teachers. Only a few students actively respond to questions asked by the teacher, others are passive in learning activities.

Based on these problems, media that can combine text, images and sounds is a media that is in great demand by students. One of the media that can combine these three things is interactive learning animation media using Linktree. The reason for choosing the interactive Linktree is because it is link-based and can include several links from the sources in it, and can be accessed anytime and anywhere by everyone.

An interactive linktree is a link site that provides several tools in the form of a simple and easy-to-use interface. Linktree is widely used by several people for social media such as combining links from Instagram, Facebook, and WhatsApp applications. However, in this case, the researcher uses Linktree to invite students with different perspectives, namely by using it as an access to student learning. Linktree is an application in the form of a website that provides one link, where with one link you can access several links that the designer has with a simple and easy-to-use appearance Pertiwi (2020).

Linktree can be used as a learning

medium in distributing teaching materials to students, one of which can be shared learning animation video media, learning animation video media is a media that can be seen and heard using the help of moving animation which explains the opening of learning, the core of learning (explanation of the material), the closing of learning according to each required lesson content, Furthermore, with the help of Linktee, you can access the animation media that will be developed. In Linktree, its use can also be converted into an e-learning learning medium that can be accessed using gadgets and computers connected to the internet network, with the help of teachers as facilitators and other supporting applications during the covid 19 pandemic. By using interactive Linktree-based animation learning media, it is hoped that it can help teachers in delivering material and can increase students' interest and motivation in learning.

2. RESEARCH METHODS

This research uses research and development (R&D) methods. Research and Development (R&D) is a research method used to develop a new product or improve an existing product, produce a specific product and test the effectiveness of that product. If a new product has been tested, then if the product is used in the work, the implementation of the work will be easier, faster, the quantity, and the quality of the work product will increase.

Development research is research that focuses on products that can be developed in the form of media, teaching materials, strategies or methods, learning approaches. In developing interactive linktree-based learning animation media, theme 3 sub-theme 2 diversity of living things learning 3 grade IV elementary school model used in this study developed by Thiagrajan is a 4D (Define, Design, Development, and Dissemination) model. The subjects of this study are grade IV students for the 2021-2022 Academic Year at SDN 106158 Pematang Johar which totals 30 people, namely 15 female students and 15 male students. Meanwhile, media expert validators and material expert validators are UNIMED lecturers in the field of media and thematic to test the validity of the products developed by researchers. Meanwhile, the object of this study is the development of thematic interactive linktree-based learning animation video media for students.

This research and development was carried out at SDN 106158 Pematang Johar Village, Pasar VI, Labuhan Deli District, Deli Serdang Regency, North Sumatra in Class IV of SDN 106158 Pematang Johar. The research and development time is carried out from January to May 2021-2022. This study uses the 4D Model development procedure proposed by Thiagrajan. Thiagrajan said that 4D stands for Define, Design, Development, and Dissemination. Define (Definition) which contains activities to determine what products will be developed, along with their specifications. Design contains activities to make designs for products that have been determined. Development is the activity of making a design into a product and testing the validity of the product repeatedly until the product is produced in accordance with the applied specifications. Dissemination contains the activity of disseminating products that have been tested for use by others.

Data collection techniques are strategies or methods used by researchers to obtain the data needed in their research. Data collection is intended to obtain reliable materials, information, facts and information. To obtain this data, various methods can be used in the research, including questionnaires, observations, interviews, tests, and document analysis (Kurniawati,

2019).

The instruments used in this study are in the form of a questionnaire for the feasibility test of learning media, materials, practitioners for experts, student responses and tests in the form of questions for students, with the aim of determining the effectiveness of the media. Student learning outcome test scores are obtained after students work on pretest and posttest questions. The media can be said to be effective if the average learning outcome test for grade IV students of SDN 106158 Pematang Johar meets the KKM (Minimum Completeness Criteria) of 70. In order for the test used to be in accordance with the standards, the test was first tested in class V of SDN 106158 Pematang Johar to find out that the question was valid and reliable.

Analisis ini digunakan untuk mengetahui hasil belajar pada siswa yang menggunakan Media Pembelajaran Video Animasi Berbasis Linktree Interaktif. Uji kemampuan hasil belajar pada siswa dilakukan melalui pre-test dan post-test terhadap soal-soal hasil belajar. Uji T-test dilakukan untuk mengetahui adanya peningkatan siswa setelah menggunakan Media Pembelajaran Video Animasi Berbasis Linktree Interaktif. Pengambilan keputusan dapat disimulasikan sebagai berikut dengan menggunakan aplikasi SPSS 26 yaitu:

1. Significant value (2-tailed) >0.05 = no improvement in learning outcomes after using Interactive Linktree-Based Animated Video Learning Media.
2. Significant value (2-tailed) <0.05 = there is an increase in learning outcomes after using the Interactive Linktree-Based Animated Video Learning Media product. The length of research on the development of interactive linktree-based animation learning video media theme 3 subtheme 2 diversity of living things in grade IV elementary school.

3. RESULTS AND DISCUSSION

The results of the development research conducted by the researcher are producing Interactive Linktree-Based Learning Animation Video Learning Media on Theme 3 Subtheme 2 Diversity of Living Creatures Class IV Elementary School. In the development of Interactive Linktree-Based Learning Animation Video Learning Media, the researcher uses the 4D model Research and Development (R&D) method with the following stages: Define, Design, Development, Disseminate. This analysis is needed to find out the characteristics of students in accordance with the design and development of the learning media to be developed. This analysis was carried out on November 2, 2022, and this analysis was seen in terms of the age of the students, and their academic ability.

a) The average age of grade IV students is 9-10 years old, children in this age group can think logically about concrete events and are able to operate technology such as mobile phones or computers even though they are not too proficient. In the learning process, students prefer to learn to use media, especially using media that is able to display images, sounds, and text.
b) The academic abilities possessed by grade IV students are heterogeneous with high, medium and low ability categories. However, judging from the acquisition of learning outcomes after classroom observation, learning outcomes are still low, especially in theme 3 subtheme 2 learning 3 as seen from the list of students' test scores.

Based on the analysis that has been carried out, a learning tool is needed as an intermediary in teaching, namely an effective medium to overcome the problems that

occur. Therefore, the researcher developed an interactive linktree-based animation video media. In addition to making it easier for teachers and students in the process of teaching and learning activities, this media can also be used in distance learning. The material selected to be developed in the interactive linktree-based animation video media is interviews and analyzing the shape and function of the animal's body.

On November 3, 2021, the researcher observed the learning tools used at SD Negeri 106158 Pematang Johar, namely, the grade IV thematic package book, the media of images pasted on the wall which are various according to the material to be studied, the lesson plan made by the teacher, projector, and infocus. Based on the observations made by the researcher, it can be concluded that teachers need effective learning tools, which can support the improvement of student learning outcomes, for example, in addition to learning tools that have been provided in schools and classroom teachers such as thematic package books, picture media, lesson plans that are the demands of teachers to design them, teachers need to make new innovations for it, then interactive linktree-based learning animation video media that uses technology In it, it is very much needed to keep up with the times and improve student learning outcomes.

The analysis of learning objectives was used as an initial guideline for the creation of interactive linktree-based learning animation media which was carried out on November 7, 2021, so that it could be used according to the purpose. Learning objectives are derived from indicators to be achieved and then specified into learning objectives. The analysis of learning objectives includes:

a) Through learning videos, students are able to dig up information from a figure through interviews well.
b) Through learning videos, students are able to dig up information from a figure using a list of questions correctly.
c) Through learning videos, students are able to analyze the shape of animal body parts well.
d) Through learning videos, students are able to analyze the relationship between the shape and function of the animal's body correctly.

Research Discussion

The development of interactive linktree-based animated video learning media uses development research with a 4D model proposed by Thiagrajan. The 4D model consists of 4 steps, namely 1) Define, 2) Design, 3) Development, and 4) Dissaminate.

The first stage is define. This stage serves to find out the existing problems consisting of several aspects, namely teacher needs analysis, student analysis, learning tool analysis, material analysis and learning objectives. The analysis of the needs of teachers and students was obtained from interviews and learning outcomes of students who had not reached the KKM**.** Based on the analysis of the information and data obtained, it can be concluded that the research subject needs an innovation of the latest learning tools, especially IT-based media, namely interactive linktree-based animation media in theme 3 subtheme 2 which can help students understand the subject matter and improve student learning outcomes.

The second stage is design, the researcher prepares an initial plan for making interactive linktree-based animated video learning media on Theme 3 Subtheme 2 Learning 3 Grade IV Elementary School. This stage begins with the creation of a linktree flowchart which consists of student attendance, study instructions, learning animation media, and online quiz games as a form of student evaluation.

Next, make an animated storyboard that tells about the design of an animated video made with a table starting from the creation of animated characters, the design of KI, KD as well as learning indicators and objectives, detailing the beginning, core and closing activities of learning. The way for students to use this media is for students to log in to *link* http://novitaanggraini.my.id/, Students are directed to fill in the absence by clicking the absence button, after that students are directed to read the study instructions and do each instruction in the study instructions by clicking on the study instructions, then students are directed to watch a moving animation video and listen to each existing lesson by clicking the learning animation video button, after the video is finished being watched by the students, the teacher provides explanations and directions related to the subject matter being studied, In line with that, students are directed to work on LKPD in groups, LKPD is also included in the video, finally students do online quiz games as a form of student evaluation, games that have elements of lessons in them and are played online. How to play it by clicking the online quiz games button**.** It is played sequentially because there are several games in it. Finally, there is an author profile button that contains the profile and identity of the researcher as an identification of the media creator.

After doing the design stage, the third stage is to do the development stage. This development stage consists of 2 stages, namely: a) Validation stage, b) Product trial stage. The validation stage is a stage to test the feasibility and practicality of the media developed after previously going through the design stage, In this case, the validator is given a questionnaire that has previously been declared feasible by the questionnaire validation lecturer. This questionnaire was filled out by a media expert validator, namely Mrs. Reni Rahmadani S.Kom., M.Kom, a material expert validator, namely Mrs. Masta Marselina Sembiring S.Pd., M.Pd, and an interactive linktree-based animation media practicality assessment, namely Mrs. Ridawati S.Pd, a grade IV teacher. Media validation is carried out twice to produce media that is suitable for use. The first phase of media validation was carried out on March 15, 2022 with an average eligibility percentage of "60%" with the category "quite feasible". Then after a revision on March 21, 2022, a second validation was carried out with the result of a feasibility percentage of "90%" in the "very feasible" category. Then proceed to the validation of the material. Material validation is carried out twice in order to produce media that is suitable for use. The first phase of material validation was carried out on March 16, 2022 with an average feasibility percentage of "48.3%" with the category "quite feasible". Then after the revision was carried out, a second validation was carried out on March 22, 2022 with the result of a feasibility percentage of "90%" in the category of "very feasible". Finally, an assessment of media practicality is carried out by expert practitioners (class teachers). The practicality assessment is only carried out once and the media has been declared practical without revision and can be tested in the field. The first stage of the practicality assessment was carried out on March 23, 2022, and a practicality percentage of 93.3% was obtained in the "very practical" category. When it has been declared feasible and practical, then the media product is implemented in the field or tested to grade IV students to see the effectiveness of the media developed. Before the media was tested, the researcher conducted a validity test on grade V students, out of 15 questions 10 valid questions. Validity questions are given to students as many as 20 students in class V. And these 10 valid questions will be

tested as Pre-test and Post-test questions that researchers use when implementing them to students, students fill out the Pre-test before the teacher teaches the media, and fill out the Post-test questions after the media products developed are taught by teachers to grade IV students. From the student trial, it was found that the learning results of pre-test and post-test students increased and had achievement of KKM. It can be seen that the learning outcomes of students before using interactive linktree-based animation video learning media in theme 3 subtheme 2 learning 3 obtained an average total score of 51.7% in the category "Lacking" the completeness criterion "Incomplete", but after using interactive linktree-based animation video learning media in theme 3 subtheme 2 learning 3, the average total score students increased to 90% of the "Excellent" category of the "Complete" completeness criteria. The media products developed are also said to be effective because 100% of students have improved their learning outcomes. In addition to being effective, students also responded well to the media developed, which can be seen from the response of students who obtained an average of 4.2 which stated "Good". This media is said to be effective and has a good response to students because interactive linktree-based animation video media products have advantages and disadvantages, each of which can be seen in the following details:

a. Superiority

1) This media is integrated in link-based technology but can be interactive that combines multiple links in it.
2) This media has been declared feasible and by all expert validators and practitioners.
3) This media can be used as an offline and online learning resource

b. **Debilitation**

1) This media requires a stable internet network
2) Need an infocus tool and a laptop if you want to display in class offline.

The fourth or last stage is dessiminate (spreading), at this stage packaging and dispersal are carried out. At the stage of dissemination of interactive linktree-based animated video learning media, it has been declared feasible, practical and effective to be disseminated, but due to time limitations during the covid 19 pandemic and limited face-to-face by students. So the distribution was carried out in grade IV of SDN 106158 Pematang Johar only.

Research Results with Relevant Research

The results of the research are supported by the results of research obtained by Rizky Wantoro, et al. (2021) with the research title "Development of "Linktree" Media in Online Learning Conveying News Texts for Grade VIII Students" with the results of the research, namely the results of the effectiveness test of the use of "Linktree" students obtained an average score of 3.51 which stated that the linktree media was effectively used. The results of this study have relevance to the development of interactive linktree-based animation media with the results of the study testing the effectiveness of linktree as an accessor from all learning resources.

Furthermore, the results of the study are supported by the results of research obtained by Nusirwan (2020) with the research title "Development of Based Teaching Materials (ICT) Using Linktree on Social Arithmetic Materials for Grade VI Students of SD Islam Annur Prima During the Covid 19 Pandemic" with the results of the research, namely the assessment of the validity of material experts with an average presentation of 81.42% is categorized as very

good, Validation of media experts with an average presentation of 86.33% is categorized as very good, Validation of practitioner experts with an average presentation of 96% is categorized as very good. So it can be concluded that ICT-based teaching material products using linktree are very feasible to use and can be an alternative media that can distribute arithmetic teaching materials at SDS Islam Annur Prima Class VI. The results of this study have relevance to the development of interactive linktree-based animation media with the results of the research testing the feasibility of products validated by material experts, media experts, and practitioner experts who obtain very good/feasible results.

Finally, the results of the study are supported by the results of research obtained from Maya Raisha (2021) with the research title "Development of Web-Based Teaching Materials Using Linktree on Nervous System Materials" class V of Al-Wasyiah Kota Baru Private Elementary School obtained the results of research on web-based teaching materials using Linktree on the nervous system of 86% very valid can be used as a learning medium. The results of this study have relevance to the development of interactive linktree-based animation media, which is related to validating products and testing the feasibility of accessing learning tools that use linktrees.

Based on this description, it was obtained that research conducted by Novita Anggraini (2022) stated that interactive linktrees are very feasible, practical, and effective to be used as a link site assistance that can combine several links in it. Previous research used linktree to share teaching materials and several teaching materials such as (e-modules, e-books). Here, Novita Anggraini (2022) presented a research that is different from previous research, namely using linktree as a link aid to share animated learning video media that can motivate learning and improve student learning outcomes.

4. CONCLUSION

Research and development of interactive Linktree-based learning animation media on Theme 3 Subtheme 2 Learning 3 grade IV of SDN 106158 Pematang Johar, has been completed in accordance with the steps and stages of development research. Based on the research and development carried out by the researcher, several conclusions were obtained, namely:

a. The results of interactive linktree-based animated video learning media on theme 3, subtheme 2, learning 3 which have been validated by media validator Mrs. Reni Rahmadani, S.Kom, M.Kom. with a total eligibility percentage of 90% with the category "Very feasible". Then the validation of the material by Mrs. Masta Marselina Sembiring, S.Pd., M.Pd. with the final result of a total eligibility percentage of 90% with the category "Very feasible". Based on the validation carried out by media expert validators and material expert validators, the Interactive Linktree-Based Animated Video Learning Media is "feasible" to be used in the learning process.
b. The results of the interactive linktree-based animated video learning media that have been developed are then tested for practicality through the assessment of education practitioners. The assessment of education practitioners was carried out by Mrs. Ridawati S.Pd as a fourth grade teacher of SDN 106158 Pematang Johar. Furthermore, the results of the assessment obtained a percentage of practicality of 93.3% which is included in the "Very practical" category. Based on the results of the practicality assessment by education practitioners, the Interactive

Linktree-Based Animation Video Learning Media on Theme 3 Subtheme 2 Learning 3 is "practical" to be used in the learning process.

c. The results of the effectiveness of the Interactive Linktree-Based Learning Animation Video Media developed using questions have been tested to be able to see an increase in student learning outcomes. Based on the trial, it was seen that the learning outcomes of each student before and after using the Interactive Linktree-Based Learning Animation Video Media were seen. Before using the media, the average score of students was 51.7 with the category of "Poor", the completeness criterion of "Incomplete" and after using the media, the average score of students increased to 90.0 with the categories of "Very Good" and "Complete". Based on these results, it is known that Interactive Linktree-Based Learning Animation Video Media is "effective" to be used and utilized in the field of education.

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