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## Development of *Nearpod*-Based Interactive Media on Science Learning Style Material Theme 7 Subtheme 1 Class IV SDN 008 Sungai Kunjang

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### ABSTRACT

Interactive media is needed in the era of revolution 4.0, because it makes easy way for teachers to educate students. Interactive media makes the learning process interesting by combining visual and audio. This study aims to determine the feasibility and response of students regarding *Nearpod*-Based Interactive Media in Science Learning Style Material Theme 7 Subtheme 1 Class IV SDN 008 Sungai Kunjang. The research method used is R&D (*Research and Development*) with the ADDIE development model. Data collection techniques with observation, interview, and questionnaire methods. The results of this study are in the form of interactive learning media that can be accessed by students in the *Nearpod* application that can be used anywhere and anytime. The feasibility assessment from media experts obtained a score of 86% in the very valid category, then the feasibility assessment from material experts obtained a value of 98.4% in the very valid category, and student responses obtained a value of 92.5% in the very good category. Based on the results of the feasibility test, it can be concluded that the Development of *Nearpod*-Based Interactive Media in Science Learning Style Material Theme 7 Subtheme 1 Class IV can be used for the real teaching media.

### 1. Introduction

The National Education System in Law of the Republic of Indonesia No. 20 of 2003 article 1 paragraph 1 states that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and State. Through education, one can

improve the quality of human resources to be able to compete against advances in science and technology (Agustina & Juliar, [2021](#)).

The problem that is often faced by the world of education is the weak learning process in the classroom. Learning in the classroom includes two important aspects, namely teachers and students. Teachers have the task of teaching and students learning. Teaching is communicating something to a person or group of people with the intention that they

know or understand what the teacher teaches them. While learning can be interpreted as a process of behavior change through interaction between individuals and their environment (Gherheş et al., 2021; Hardiansyah, 2021). The learning process in the classroom requires supporting facilities and infrastructure, one of which is learning media. The use of media is expected to increase maximum learning outcomes (Tran-Duong, 2023).

Rapid technological development can be utilized in the development of learning media. One of them is the use of digital interactive learning media is an aspect that has been developed in educational technology (*education technology*) in the development of media that can later be used to convey learning messages. Educational technology is also part of educational development that facilitates teachers or educators to optimize student learning outcomes through innovations in learning media, especially learning media with digital interactive platforms to match the characteristics of students today. Media was created to make it easier to explain the material to be taught in a lesson and also as an intermediary tool for information sources (Zaini et al., 2020; Amali et al., 2019).

The component that supports teaching and learning activities is interactive learning media based on digital technology, namely using the *Nearpod* application (Oktafiani, & Mujazi, 2022). The use of *Nearpod* applications in learning will certainly answer the challenges of the revolution era 4.0 in the world. Thus, digital-based interactive educational media is needed to make it easier for teachers to educate students. One of the digital-based interactive media that can be used by teachers is the *Nearpod* application which can be accessed on the <https://Nearpod.com/> website.

The *Nearpod* application is a website-based learning application that can make it easier for teachers to develop more interactive teaching in the classroom, thus adding to the learning experience for students. We can also access *Nearpod* learning media using the website or application we can also download on a laptop or computer. *Nearpod* also presents various features to combine presentation documents, virtual reality (VR), insert PDFs, and others (Ami, 2021). In the *Nearpod* activity feature, this application has been equipped with interactive quizzes, entering questions for long answers, memory tests, filling in dots, and answering questions with pictures (Munandar & Ahmad, 2022).

Based on research conducted by Elvinas & Erita (2022) in their research explained that the *Nearpod*

application is highly recommended to teachers because this application is easy to use, besides that students are more stimulated to follow the learning process so as to make students more active, and teachers can more freely monitor the progress of each student. In addition, the application strongly encourages active learning in the classroom.

Science lessons are one of the important subjects instilled in students because through science learning, students are able to be scientific in solving the problems faced (Havia et al., 2023; Rev et al., 2020; Rahmi et al., 2019). Natural Sciences is a subject that has an important role in developing the overall ability of students in the learning process, this is because science is part of the subjects developed with the aim of achieving three competencies, namely knowledge competence, attitude competence and skill competence so that the process of developing these three competencies Science plays an important role, especially in the development of knowledge, students' attitudes and scientific skills.

Development of technology-based interactive learning media, especially in the *Nearpod* application, can be one solution to increase students' enthusiasm and interest in science learning, especially class IV style materials. This research aims to determine the feasibility of *Nearpod*-Based Interactive Learning Media in Science Learning Theme Style Material 7 Subtheme 1 Class IV SDN 008 Sungai Kunjang and to determine the response of the students as well.

## 2. Methodology

This research uses the type of Research and Development. Using the ADDIE model, which is a model that has a procedural stage in each design or design that is more systematic (Munandar & Ahmad, 2020). The ADDIE model has 5 stages, namely *Analysis*, *Design*, *Development*, *Implementation*, and *Evaluation*. The *Analysis* stage is the initial stage where researchers make observations and interviews to find out what students need and analyze the needs for interactive media to be developed. *Design* stage is the stage of designing learning media that will be developed in accordance with the previous analysis. *Development* Stage is the stage of realizing interactive media design that will be made according to the previous design.

At this stage, validation is also carried out by media experts and material experts and provides suggestions

and input on the interactive media that has been created.

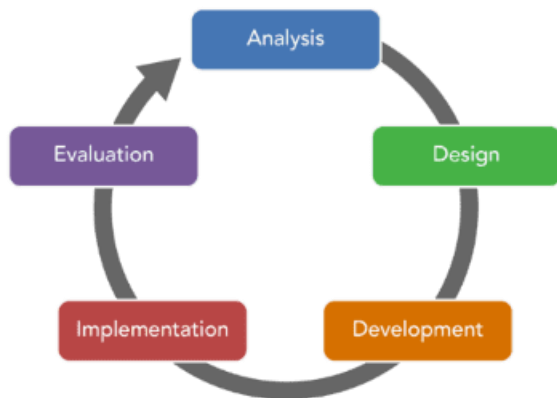


Figure 1. Model ADDIE

Image Source: courses.lumenlearning.com

Furthermore, make revisions to improve the interactive media created. Implementation stage, which is the stage of testing interactive media for students to find out the response to the interactive media created. The *Evaluation* stage is the final stage of media development research. This stage is to see whether the goals and objectives have been achieved or not. Data collection techniques with observation, interview, and questionnaire methods. Questionnaires are used to obtain data from media experts, material experts, and student responses. This research instrument uses Likert scale. The *Likert* scale is used to measure the attitudes, opinions, and perceptions of a person or group of people about social phenomena (Sugiyono, 2021). The grid of research instruments of media experts, material experts, and learners is as in Table 1.

Table 1. Research Instrument Grille

Media Expert	Assessment Aspect	
	Material Expert	Learners
Media Display	Material Eligibility	Student Interest
Use of Language and Words Programming	Contents Eligibility Language	Media Display Benefit Language

The *Likert* scale has five alternative answers, which are as follows. Strongly Agree (SS) with a score of 5, Agree (S) with a score of 4, Simply Agree (CS) with a score of 3, Disagree with a score of 2, and Strongly Disagree (STS) with a score of 1. This validation sheet is in accordance with Arikunto's opinion in (Susanto, 2021) the eligibility criteria used in the

validation of media experts and material experts are presented in Table 2.

Table 2. Validation Criteria

Judging Criteria	
Percentage Interval	Category
<21%	Very Not valid
21% - 40%	Not Valid
41% - 60%	Less Valid
61% - 80%	Valid
81% - 100%	Very Valid

The eligibility criteria used in student responses are presented in the Table 3.

Table 3. Student Response Criteria

Judging Criteria	
Percentage Interval	Category
<21%	Very Not Good
21% - 40%	Less
41% - 60%	Good Enough
61% - 80%	Good
81% - 100%	Very good

The development of *Nearpod-based* interactive media is considered valid and very valid or good and very good by experts and learners if they obtain a score  $\geq 61\%$  and score  $\geq 81\%$ .

### 3. Results and Discussion

#### Result

This research was conducted with the aim of developing *Nearpod-based* interactive media and knowing the feasibility and response of students. In developing *Nearpod-based* interactive media, researchers use the ADDIE development model which has 5 stages. The following are the results of research with 5 stages, which are as follows:

#### Analysis

In the analysis stage, researchers conducted interviews with grade IV teachers to obtain the data needed in the interactive media development stage. The interview was conducted at SDN 008 Sungai Kunjang. The analysis obtained includes needs analysis and curriculum analysis. From the results of interviews with researchers and homeroom teachers IV it is known that students are less focused on the learning process because teachers still use the lecture method, where students will get bored quickly and the lack of use of learning media by teachers is due to very limited media in schools. Therefore, it is necessary to use learning media that attract students'

interest in science learning to achieve optimal learning outcomes, especially in style materials.

**Design**

The *design* stage is to create an interactive media using the *Nearpod* website (Figure 2). Before creating interactive media, researchers prepare several needs such as materials, images and videos related to the material, background, flowchart, and storyboard. In making backgrounds, researchers use the Canva application.

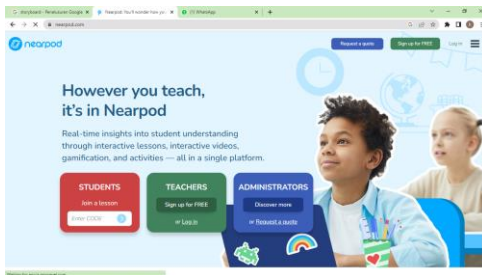

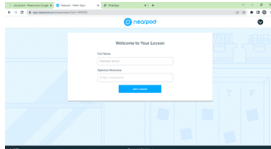


Figure 2. *Nearpod* Website Display

**Development**

At the development stage, researchers began to realize the development and design of interactive media based on *Nearpod*. Researchers developed *Nearpod*-based interactive media created on <https://Nearpod.com/> website. Everything that has been prepared at the design stage is then assembled into interactive media that is completed. The following describes the development of *Nearpod*-based interactive media that has been made in this study (Table 4).

Table 4. *Nearpod*-Based Interactive Media Display

<i>Nearpod</i> -Based Interactive Media Display	
Initial View	At the beginning of the <i>Nearpod</i> -based interactive media page, there is a code filling that the teacher will give to students. 
Profile	On this page students must type their full name and nickname 
Learning Videos	The learning video contains 3 questions about the material for simulation. Video

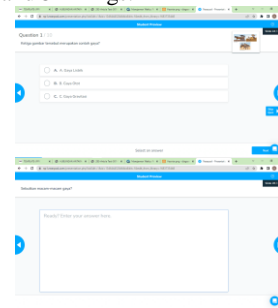
source from youtube Geniora.



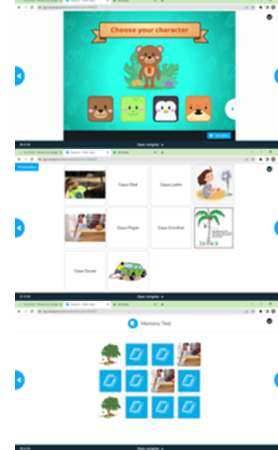
**Material** The material totals 21 pages about the understanding of style, various styles, the properties of style, and the benefits of style in everyday life.



**Quiz** Contains 15 questions, namely 10 multiple choice and 5 fillings.



**Games** Using 3 kinds of games, namely *Time To Climb*, *Matching Pair*, and *Memory Test*.



**Cover** Greetings see you at the next meeting.



At this stage, validation is also carried out to media experts and material experts. This is done to determine the feasibility of the media that has been made.

## 1. Media Expert

The results of the assessment from media experts obtained an assessment from all aspects, namely with a percentage of 80% value and declared suitable for use with revisions. The results of media expert validation are as in Table 5.

Table 5. Media Expert Validation Results Before Revision

Aspects	Percentage	Category
Media Display	80%	Very Valid
Use of Language and Words	86,6%	Very Valid
Programming	60%	Less Valid
Number of Scores		40
Percentage Value		80%
Category		Very Valid

After completing the revision, a second validation was carried out to media experts to find out whether Nearpod-based interactive media was suitable for use. The results of the assessment from media experts, obtained an assessment from all aspects, namely with a percentage of 86% value and declared suitable for use without revision. The results of media expert validation are as in Table 6.

Table 6. Media Expert Validation After Revision

Aspects	Percentage	Category
Media Display	86,6%	Very Valid
Use of Language and Words	86,6%	Very Valid
Programming	80%	Very Valid
Number of Scores		43
Percentage Value		86%
Category		Very Valid

## 2. Material Expert

The results of the assessment from material experts, obtained an assessment from all aspects, namely with a percentage of 86.1% value and declared suitable for use with revisions. After completing the revision, a second validation was carried out to the material expert to find out whether Nearpod-based interactive media was suitable for use. The results of the assessment from material experts, obtained an assessment from all aspects, namely with a percentage value of 98.4% and declared suitable for use without revision.

### Implementation

This stage researchers apply interactive media that have been prepared for field trials in schools that are

used as subjects to test the quality of media, namely *Nearpod-based* interactive media. This trial was carried out in class IV C SDN 008 Kunjang River offline on April 5, 2023. Implementation is carried out to determine the response of students whether the media that has been designed can help the learning process.

Table 7. Expert Validation of Material Before Revision

Aspects	Percentage	Category
Material Eligibility	80%	Very Valid
Content Eligibility	93,3%	Very Valid
Language	93,3%	Very Valid
Number of Scores		56
Percentage Value		86,1%
Category		Very Valid

The results of media expert validation are as in Table 8.

Table 8. Validation of Ahli Material After Revision

Aspects	Percentage	Category
Material Eligibility	97,1%	Very Valid
Content Eligibility	100%	Very Valid
Language	100%	Very Valid
Number of Scores		64
Percentage Value		98,4%
Category		Very Valid

The results of student responses, obtained an assessment of the aspect of student interest, namely with a percentage of value of 97.2%, the aspect of media display is with a percentage of value of 90.4%, the aspect of benefits is with a percentage of value of 91.1%, and the language aspect is with a percentage of value of 92.7% which means that interactive media based on *Nearpod* "Very Good" is used in the learning process. The results of student responses are as in Table 9.

Table 9. Student Response Results

Aspects	Percentage	Category
Student Interest	97,2%	Very good
Media Display	90,4%	Very good
Benefit	91,1%	Very good
Language	92,7%	Very good
Number of Scores		1527
Percentage Value		92,5%
Category		Very good

### Evaluation

This evaluation stage is the final stage of media development research (Table 10). This stage is carried out to see whether the goals and objectives have been achieved or not by concluding based on

the results of questionnaires and student responses. Thus, researchers can find out the success of the product that has been designed.

Table 10. Results of Each Stage

Results of Each Stage				
No	Stages of Assessment	Number of Scores	Percentage Value	Category
1	Media Expert	43	86%	Very Valid
2	Material Expert	64	98,4%	Very Valid
3	Learners	1527	92,5%	Very good

### Discussion

The development of *Nearpod-based* interactive media in science learning theme style material 7 subtheme 1 grade IV SDN 008 Sungai Kunjang is intended to produce interactive media that will be used in the learning process using the ADDIE development model which has 5 stages. *Nearpod-based* interactive media has been validated by 2 lecturers as media experts and material experts.

The results of the assessment conducted by media experts are obtained from all aspects, namely with a percentage of 80% value and declared suitable for use with revisions, revisions from media experts, namely quizzes added processing time, by using time, students can do questions with focus and concentration so that time is not wasted.

According to Akram, time management is the ability to use time effectively and efficiently to obtain maximum benefits (Minarto, 2018), students can see double-choice quiz scores along with correct answers, source video attendance in the media, and add instructions for working on quiz questions and games. After making revisions, a second validation was carried out to media experts and an assessment of all aspects was obtained with a percentage of 86% value and was declared suitable for use without revision.

The results of the assessment conducted by material experts were obtained from all aspects, namely with a percentage of 86.1% values and declared suitable for use with revisions, revisions from media experts, namely the material style properties equipped with relevant images or in accordance with the material discussed and adding basic competencies 4.3 learning science style material into interactive media. After making revisions, a second validation was carried out to material experts and an assessment of all aspects

was obtained with a percentage value of 98.4% and was declared suitable for use without revision.

*Nearpod-based* interactive media can be said to support the implementation of the learning process because the media developed has been able to display and present materials that are in accordance with the core competencies and basic competencies in science learning theme style material 7 subtheme 1 class IV at SDN 008 Sungai Kunjang. In the aspect of student interest, it gets a score of 97.2%, which means that *Nearpod-based* interactive media is very good because in the media there are learning videos that contain animations that explain the material not only in words. (Afridzal et al., 2018) the benefits of animated videos in learning are, "Facilitate interaction between teachers and students so that learning activities become effective and efficient".

In the aspect of media display, it gets a score of 90.4%, which means that *Nearpod-based* interactive media is very good because of the selection of the right background, easy to read fonts, font sizes are not large or small, and the font color is not the same as the background color. In the aspect of media benefits, it gets a score of 91.1%, which means that *Nearpod-based* interactive media is very good because it is easy to use, can be accessed anytime and anywhere, the material provided is easy to understand and the explanation of the material is included with images.

Subana (2002) mentions that teachers use image media to give an idea of something so that the explanation is more concrete than described words (Utami & Amaliyah, 2022). In the language aspect, it scored 92.7%, which means that *Nearpod-based* interactive media is very good because it uses standard language that is easily understood by students.

Every interactive media must have advantages and disadvantages, including *Nearpod-based* interactive media. The advantage of this *Nearpod-based* interactive media is that this media includes media that attracts the attention of students because there are various games so that it can increase students' interest in learning. Then this *Nearpod-based* interactive media can be accessed by electronic devices such as smartphones so that it can be learned anywhere and anytime by students. This *Nearpod-based* interactive media has the disadvantage that it is still heart with an internet network connection, so that if the internet network connection is less stable, this *Nearpod-based* interactive media cannot be accessed or is not optimally used.

#### 4. Conclusion

Based on the results of research and discussion, the following conclusions can be drawn: The process of developing *Nearpod-based* interactive media uses the type of *Research and Development* research using the ADDIE model which has 5 stages namely Analysis, Design, Development, Implementation, and Evaluation was successfully developed. The

feasibility results of *this Nearpod-based* interactive media received an assessment from media experts, material experts, and student responses. Media experts obtained a rating with category of very valid. Then the material expert obtained an assessment with the very valid category, then the results of the assessment of responses such as students obtained an assessment in the very good category.

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