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Developing Nearpod-Based Interactive Multimedia on the Topic of Indonesian Cultural Diversity for 4th Grade Elementary School Students

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Abstract

This research aims to create a valid, practical, and effective Nearpod-based interactive learning media to improve learning outcomes of social sciences content on the material "Indonesian Cultural Diversity." This is development research with the ADDIE model (analysis, design, development, implementation, and evaluation). Based on the results of the expert assessment, the validity of the product obtained a score of 92.18% with the criteria of "very valid" in the aspects of suitability of material and learning objectives, language, media display, excellence, and media use. Material validation scores on aspects of accuracy with learning objectives, students' level of thinking, language, and supporting aspects (videos, images, quizzes) also fall into the "very valid" category with a score of 95%. Based on student responses to the content of the material, ease of use, material display, linguistic aspects, and readability of the material are also in the very valid category, with a percentage of 91%. Based on the N-Gain calculation of students' pretests and post-tests, Nearpod media received a score of 0.74 from 22 large group students, while six small group students obtained a score of 0.8 in the "High" category, as well as the material achievement score from the N-Gain results of 92.3% with the "Very Good" category, which means that 26 out of 28 students get scores above learning objective completeness criteria (KKTP).

Keywords: development; interactive multimedia; nearpod; social sciences; learning outcomes

INTRODUCTION

The rapid advancement of technology today is very helpful for teachers in creating interactive learning media that can increase students' interest in learning. The utilization of information technology as a support for learning media provides a new, more attractive appearance and features that can improve students' learning skills (Cerya et al., 2021). Learning media can be used as a tool for teachers to convey abstract messages, ideas, or information, explaining the relationship between materials accompanied by concrete examples that are more easily understood by students. This is in line with the statement from Kustandi in Syofyan & Husni (2023), which states that the effective benefit of using learning media is that it can explain the openness of the material and the relationship between materials so that it can accelerate understanding of material concepts and improve student learning outcomes. Therefore, learning media that is interesting and in accordance with the needs of students can certainly be a reference for the success of a lesson because it can increase students' motivation and concentration in learning.

Packaging material by applying monotonous and less interactive learning media will be saturated so that students tend to be apathetic when participating in the learning process, which has an impact on their suboptimal learning outcomes Kamilah & Susanti (2022). However, in reality, there are still many educators who have not utilized these advances to support the learning process and even still apply conventional methods during teaching and learning activities. Even though there have been many previous studies that prove learning media has an impact on improving student learning outcomes. One of them is research from Amalina & Inayati (2021), which explains that in order for student learning outcomes to be optimal, teachers should optimize the quality of the learning media used first because improving the quality of educational media will also affect the improvement of student learning outcomes.

Based on the results of observations at elementary school Ngaliyan 01 Semarang, researchers assessed that there are still a number of problems faced by teachers and students during the implementation of learning in the classroom. The results of interviews with teachers show that there are still some students who are less focused on participating in learning in the classroom, causing learning activities to be less conducive. In addition, there are also students who are very hyperactive during learning activities, so they disturb the concentration of other friends. In learning activities, conventional methods are also often applied, such as giving an explanation of material, and then students are asked to listen to the explanation while occasionally asking questions and answers, followed by doing assignments. This teaching method makes the learning process still centered on the teacher and the teaching materials used; as a result, students tend to be more passive and easily feel bored. In addition, the use of less varied learning media also causes students to have difficulty understanding the concept of Indonesian cultural diversity material

because the material is broad and complex, and student motivation is lacking. This is reinforced by data learning outcomes of natural and social sciences of fourth-grade students of public elementary school Ngaliyan 01 Semarang in the odd semester exam of the 2023/2024 school year on the social sciences learning content shows the presentation of incompleteness according to the Criteria for Achievement of Learning Objectives (KKTP) which is quite high, namely 42%. The achievement of learning objectives (KKTP) is quite high, namely 42.8%, with the following details as follows: 15 out of 28 students in class IV of Ngaliyan 01 public primary school Semarang have not been able to exceed the KKTP. This research focuses on the social sciences content of Indonesian cultural diversity material in Chapter 6. This material was chosen because the results of the analysis of the teacher and student needs questionnaire show that students still have difficulty understanding this material due to its broad scope and the lack of technology-based learning media innovation.

This problem should be a serious concern of schools, especially teachers as learning designers in the classroom. The lack of teacher innovation in designing learning media is due to teachers' lack of mastery of technology and limited time due to the demands of school administration. Based on the explanation of the problem, the alternative solution that researchers provide is to develop a Nearpod-based learning media product that has a simple initial appearance and is flexible because it can be accessed anywhere and anytime. Nearpod is a web-based application and can also take the form of an application that can be downloaded on the Playstore or Appstore on Android or IOS mobile phones (Měkota & Marada, 2020). The same thing was also conveyed by Dyer & Hunt (Mcclean & Crowe, 2017), who stated that Nearpod is a web-based learning application that can change conventional learning to be more interactive and able to monitor progress and provide responses to students directly.

Nearpod allows teachers to be more creative and create learning media because teachers can directly add materials, brainstorming, question-and-answer activities, and educational games on one platform (Zhao, 2022). Ami (2021) stated that Nearpod has a number of advantages compared to other learning platforms, namely having diverse features and content so that it can create innovative and constructive practices and is supported by a report component that can be used to monitor students' activities and development, besides that it can also be accessed for free. This is in line with the opinion of Wahid & Cerya (2022), who state that the existence of android-based interactive media is proven to be substantial and very feasible for increasing student enthusiasm. In addition, the app strongly encourages active learning in the classroom. Learners are very satisfied with learning using the Nearpod app, and the learning is more integrated and purposeful. This is supported by research conducted by Perez (2017), which explains that this application can help teachers make material presentations interesting, fast, and easy to understand.

. This study uses two variables, namely the independent variable and the dependent variable. The independent variable in this study is Nearpod-based learning media, while the dependent variable is the learning outcomes of social sciences material on Indonesian cultural diversity. Nearpod media was chosen by the researcher because it can involve students directly during learning, is easy to use, and can always be monitored by the teacher through the participants' feature in the media. This is reinforced by previous studies that are relevant to this research and show positive results during the application of Nearpod in learning. Among them is research from Baalwi & Aulia (2022), which shows that the use of Nearpod can maximize science learning outcomes on energy change material in grade 3 elementary school. Another study was conducted by Oktafiani and Mujazi (2022), which proved that the use of Nearpod can increase student learning motivation in mathematics subjects in grade 5 elementary school. In addition, Fareza & Zuhdi's (2022) research conducted in grade 6 elementary school also showed that the use of Nearpod can make plant reproduction material more real and increase student enthusiasm for learning.

Although it has similarities with a number of previous studies that utilize near pods as learning media, it also has fundamental differences in terms of material topics, development models, and the focus of development. In this study, the focus is on developing learning media that is concise and interesting and can show the connection between materials more clearly, thus reducing the occurrence of misconceptions in learning. Therefore, researchers will develop Nearpod-based interactive learning media by examining the problems obtained at elementary school ngaliyan one Semarang, with the title " Development of Nearpod-Based Interactive Multimedia on the Material of Indonesian Cultural Diversity for 4th Grade Elementary School Students". The goal is to describe the development process, feasibility, and students' responses to Nearpod media.

METHODS

The data of this study were analyzed using the ADDIE-based Research and Development design, which has five stages: analysis, design, development, implementation, and evaluation. Researchers chose the ADDIE development model because the stages of work are systematic and simple, and each phase is evaluated and revised so that the resulting product is truly valid. This research aims to develop IT-based learning media that is concise, interesting, and able to improve students' learning outcomes.

At the analysis stage, researchers collected pre-observation data at elementary school ngaliyan 01 Semarang by conducting interviews and documentation with the fourth-grade homeroom teacher. At this stage, we also analyzed the importance of

developing a new product and its suitability to the needs of the research subjects so that it can be a solution to the problems found.

The second stage is designing the concept and content of the developed product. At this stage, there are a number of steps that must be carried out, including (1) determining learning outcomes (CP) and learning objectives (TP); (2) determining and preparing materials in accordance with learning outcomes and objectives; (3) preparing practice questions that will be embedded in the media; (4) preparing images and videos supporting media development; (5) preparing backgrounds, backgrounds, attractive buttons; (6) compiling the media design framework to be developed.

The third stage is development, which includes activities to complete the product design in the second stage. In this stage, researchers prepared pretest and post-test questions to measure the effectiveness of the interactive media developed. Researchers also compiled instruments and questionnaires for material and media experts to test the validity level of the media, as well as student and teacher response questionnaires to find out their response to the media. Validation activities aim to provide input related to the products developed so that existing deficiencies can be corrected through product revision until they meet the valid criteria for implementation.

The fourth stage is implementation, which is getting feedback on the developed product. After the product was revised and declared valid by the validator, the next stage was the application of the media for learning. The application of the media was carried out in class IV elementary school ngaliyan 01 Semarang. This stage begins with giving pretest questions before applying the media. After that, researchers gave a response questionnaire to the fourth-grade teacher and fourth-grade students of elementary school ngaliyan 01 Semarang to determine the effectiveness of Nearpod-based interactive media. The next stage is giving a post-test to students after using the media to measure the level of understanding of student material.

The fifth stage is evaluation, which aims to evaluate the feasibility and implementation of development objectives ranging from validation questionnaires by experts, response questionnaires by students and teachers, and student learning outcomes in the material "Indonesian Cultural Diversity."

This research was conducted in elementary school Ngaliyan 1 Semarang. The subjects in this study were: (1) fourth-grade students of elementary school Ngaliyan One Semarang, totaling 28 students divided into large groups (22 students) and small groups (6 students); (2) fourth-grade teachers of Elementary School Ngaliyan 1 Semarang; (3) media expert lecturers and material experts, to assess the validity level of the media. The reason why the researcher chose the 4th-grade students of elementary school Ngaliyan 1 Semarang as the research subject was due to various

considerations related to the following: (1) there has been no similar research in this school; (2) the place is strategic and affordable by the researcher; (3) grade 4 students have just entered the transition period from low class to high class, so they need media that support learning; (4) the researcher has conducted field experience practice (PPL) for approximately three months, so they understand the real conditions in the field. Elementary school Ngaliyan 1 Semarang is equipped with adequate and conducive infrastructure to support the learning process. However, due to the limited time of teachers, learning media is still limited to printed media in the form of modules or LKS, PowerPoint, and Youtube-based learning videos. Therefore, the researcher wants to contribute by developing an IT-based learning media that, in the future, can be created by the teacher himself, does not take much time in its preparation, and is able to increase students' enthusiasm for learning.

This development research uses several data collection instruments, namely: (1) a teacher needs analysis questionnaire consisting of 25 questions and a student needs questionnaire consisting of 20 questions; (2) a material expert validation questionnaire with 16 questions and a media expert consisting of 20 questions; (3) a teacher and student response questionnaire to measure the practicality of the results of the trial use of the media; (4) effectiveness test with pretest and post-test questions which include 20 multiple choice questions. Before the data collection stage, all questionnaires and test questions were tested for validity and reliability and consulted with the supervisor. Researchers also conducted interviews with grade 4 teachers regarding the problems and needs of learning media development.

To determine the level of validity of the media, researchers used the criteria for evaluating expert validation sheets with a Likert scale of 1-4, namely 1 (less), 2 (sufficient), 3 (good), and 4 (very good) (Sugyono, 2016). Furthermore, the validation results will be analyzed with a formula as follows:

$$\text{Percentage Score} = \frac{\sum Score\ Obtained}{\sum Maximum\ Assessment\ Score} \times 100\%$$

(Ardiansyah in Walidah, 2023)

The pretest and post-test instruments were made by testing 20 multiple-choice questions. This media is said to be effective if students experience an increase in learning outcomes from pretest to post-test after using the media. The KKTP value used is 75. Students are declared complete if they get a score equal to 75 or more. The calculation is as follows:

$$\text{Percentage score} = \frac{Number\ of\ students\ with\ a\ score \geq 75}{Total\ number\ of\ students} \times 100\%$$

The data obtained was also analyzed for practicality by students and teachers. The last data analysis is to analyze the effectiveness obtained from the assessment sheet after students work on the pretest and post-test questions. The results obtained were then calculated with the following N-gain equation :

$$< g > = \frac{Posttest - pretest}{100 - pretest}$$

From the calculation results obtained, then the researcher can give categories in the following table:

Table 1

N-Gain effectiveness interpretation category table

N-Gain Score Distribution	
N-Gain > 0,70	High
0,30 < g < 0,70	Medium
N-Gain, 0,30	Low

RESULT

1. Results of the Analysing Stage

In the analysis stage, the researcher conducted interviews, documentation, and problem identification at elementary school ngaliyan 01 Semarang. Based on these activities, it was found that the utilization of learning media, especially IT-based media, was still not optimal due to teachers' limited time in preparing it. Teachers are more likely to use text-based learning media, such as student books and LKS books than learning videos from YouTube, which have a less interesting and less innovative impression. This makes students less active in social sciences learning activities, causing student learning outcomes to not meet the Learning Objective Completeness Criteria (KKTP).

Based on the analysis at this stage, researchers collected literature sources and supporting data that can be used as a reference in planning learning media. Researchers collected daily grades and social sciences test results of fourth-grade students of elementary school ngaliyan 01 Semarang and conducted interviews with teachers to find out more about the existing problems, as well as product development plans. The media design was prepared based on the data from the questionnaire on student and teacher needs so that the media developed was appropriate and as needed. The questionnaire showed that IT-based learning media received a positive response. Therefore, the development of Nearpod-based media is expected to be the right solution for teachers and students. This is reinforced by research (Kartini et al., 2022), which states that the use of nearpod media can attract students' attention and change the classroom atmosphere to be fun because the features in it are very interesting and have never been tried before.

2. Results of the Designing Stage

The second stage is design, which aims to design the initial product according to the expected needs. Product design requires that questionnaire data on students and teachers be analyzed. Then, the questionnaire data is recapitulated as a reference when making product designs. Nearpod-based learning media can be accessed through applications and websites that can be accessed by students through codes or links shared by teachers. The selection of text, images, colors, and material layouts are designed by considering the needs and thinking stages of students. The design of interactive media development must be carefully and precisely prepared because good interactive media is an intermediary in building students' enthusiasm for learning (Jayanti & Rosita, 2019).

3. Results of the Developing Stage

The third stage is development. Researchers develop the design design in the previous stage into a product that is ready to be tested. Researchers also conducted expert validation to determine the level of media validity. This validation activity aims to assess the feasibility of the product developed. The validation activities were carried out by filling out an assessment questionnaire, namely a Nearpod-based learning media assessment validation questionnaire on the fourth-grade social sciences lesson content of elementary school ngaliyan 01 Semarang. The data obtained was then analyzed and grouped based on the criteria achieved,

Table 2

Indicators and Results of Media Expert Validation

Assessment aspect	**Total indicator**	**Score**
Aspects of media suitability with material and learning objectives	5	4,4,4,3,4
Media display aspect	6	3,4,4,3,4,4
Media excellence aspect	4	4,4,4,4
Media usage aspect	5	4,4,3,4,4
Total	**20**	**76**
Maximum score	**80**	
Percentage	**95%**	

Material expert validation contains sixteen indicators that encourage the development of interactive media to achieve learning objectives.

Table 3

Indicators and Results of Material Expert Validation

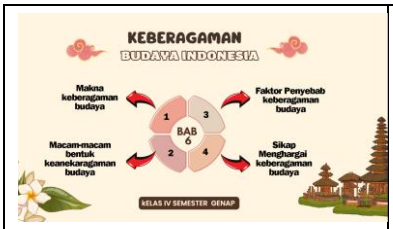
Assessment aspect	Total indicator	Score
Accuracy with learning objectives	2	4, 4
In accordance with the level of student thinking	2	4, 3
Learning content support	6	4, 4, 4, 3, 3, 4
Images can facilitate the achievement of learning objectives	2	4, 4
Appropriate to support learning material (facts, concepts, and principles)	4	4, 3, 3, 4
Total	**16**	**59**
Maximum score	**64**	
Percentage	**92,18%**	

Based on the recapitulation of the validation results of media experts and material experts, Nearpod-based learning media obtained a very valid category, with a percentage score of 90.62% from material experts and 95% from media experts. The product usage trial stage was also carried out by researchers to determine the level of effectiveness and practicality of the media. Even though it received a high score, researchers still received criticism and suggestions regarding the development of this media.

Based on the tested media, material experts gave directions to provide apperceptions with examples that students can easily encounter in everyday life before entering the material, activity instructions, and image sources that researchers use in the media. Media experts provide input to add audio to a number of parts needed, such as in apperception activities and games.

The following is a display of Nearpod-based interactive media designs that have gone through the validation and revision stages at the direction of media expert lecturers and material expert lecturers so that they are ready to be implemented.

		
Cover	Instructions for using the media	Learning objectives



Concept map of the material

Material

Material

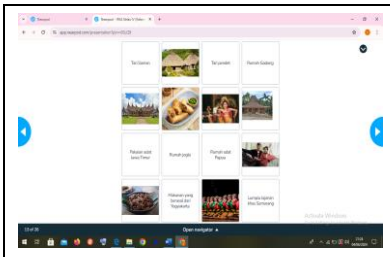
Material

Material Examples of Diversity from Aceh Province

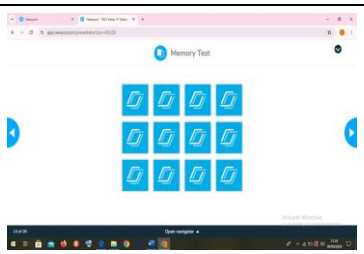
Developer profile

Image 1. The result of Nearpod-based learning media design.

This media contains learning videos and various question practice features that are packaged in the form of quizzes and educational games. In this study, researchers utilized the question exercise feature in the form of matching pairs, fill-in-the-blanks, and memory tests to test students' memory of the material.



Matching pairs



Memory test

Learning video

Image 2. Display of matching pairs and memory test

The existence of a question exercise feature like this can provoke students to be active because they discuss and exchange opinions to solve the problems given. This way, a dynamic and fun learning atmosphere will be created so that learning activities in the classroom are not only teacher-centered but also involve students actively.

4. Results of the Implementing Stage

The fourth stage is the implementation of Nearpod-based learning media in IPAS learning in class IV with 28 students, then testing its effectiveness using student learning outcomes assessment and determining the level of student mastery. The pretest and post-test learning results of students in the

implementation of product trials of class IV students of Elementary School Ngaliyan 01 Semarang are as follows:

Table 4

Recapitulation of Pretest and Post-test Results

Description	Pretest	Post-test
Average score	60,14	88,9
KKTP	75	75
Lowest Score	35	70
Highest Score	75	100
Number of Students Completed	9	26
Number of Incomplete Students	19	2

Based on this data, the results of the pretest scores were obtained with an average of 60.14, with nine students completing and 19 students not completing. In the post-test results, the average score was 88.9, and only two students did not complete the test. As a reference for grade completeness, researchers use the KKTP applied at school, which is 75. As for the value of the achievement of students' material understanding in the IPAS content of Indonesian cultural diversity material, it can be calculated based on the number of students who are complete (26) divided by the total number of students (28) and multiplied by 100%, so that the material achievement result is 92.3%, with the category "Very Good."

5. Results of the Evaluating Stage

The last stage is to evaluate the application of the developed media based on the results of teacher and student responses, as well as learning outcomes, to determine whether or not there is an increase after the use of Nearpod media. The increase in student learning outcomes can be known based on the average N-Gain of 28 students, with details of 6 small group students and 22 large group students. None of the 28 students obtained an N-Gain score below 0.30 in the low category, while for the medium category, there were eight students, and 20 students obtained an N-Gain score of more than 0.70 in the high category.

Table 5

Pretest and Post-test N-Gain Results

Class	**N**	**Average N-Gain**	**Category**
Large group	22	74.43	High
Small group	6	84	High

The table shows that the N-Gain value was obtained as a result of 74.43 for the large group and 84 for the small group with a high category. The high value shows that with the development of Nearpod-based learning media, students can more quickly understand the concept of material so that Nearpod-based interactive learning media is declared effective in improving learning experiences and student learning outcomes in social sciences content on the material of Indonesian cultural diversity.

DISCUSSION

The explanation in the results section shows that the development of Nearpod-based learning media is suitable for application as social sciences learning media in grade IV SD. The effectiveness of this media is evident from the increase in student learning outcomes before and after the use of media. This development research uses the ADDIE model, which has five stages, namely analysis, design, development, implementation, and evaluation. The selection of the ADDIE model is fixed and systematic, and at each stage, an evaluation is included as a benchmark for assessing the period that has been carried out (Elviana & Julianto, 2022). This makes it easier for researchers to carry out development steps.

This research shows consistent and even high results when compared to previous studies. The results achieved show the research objectives that have been described in the introduction, starting from the level of feasibility, practicality, and effectiveness. Nearpod-based learning media not only creates positive interaction between students but also the interaction between students and teachers. This is in line with research conducted by Nurhamidah (2021), which states that Nearpod is supported by interesting features and free access that is not limited by space and time, so it is very appropriate to support the interactive learning process.

Research relevant to this study is research from Oktafiani and Mujazi (2022), which discusses the effect of Nearpod learning media on student learning motivation in mathematics subjects in grade 5 elementary schools. This research is a quantitative study using a survey method that uses a partial test or t-test to determine the hypothesis. The hypothesis results obtained based on partial testing or t-test are 11.081 (t-count) > 2.042 (t-table) with a significant 0.00 <0.05. These results state that H1 is accepted and Ho is rejected, which means that Nearpod learning media has a positive and significant influence on learning motivation in mathematics subjects. This study has a number of similarities with those conducted by researchers, including the Nearpod media developed, as well as the research subjects, namely elementary school students. The results also show a positive and significant effect before and after the use of the media, while the difference lies in the learning material, as well as the methods used. This study is a quantitative study

using the survey method, while the one developed by researchers uses the ADDIE development model.

Another study was also conducted by Fareza Zuhdi (2022), which discussed the development of Nearpod media on plant reproduction material for grade VI elementary schools. In this study, the results of media validation were 90%, material validation was 92%, while the level of material achievement was 88%, and based on the calculation of N-Gain from students' pretests and post-tests, the media received a score of 0.67, as well as a practicality score of 80.04%. These results are similar to the latest research conducted by researchers, which has a high level of feasibility that encourages researchers to develop Nearpod media. The difference with this study lies in the material developed, and the development model applied, namely 4D.

Another study was by Baalwi Aulia (2022), who developed Nearpod-based interactive multimedia on energy change material for grade III elementary schools. This study obtained satisfactory results, including the results of validation from material experts with an average of 93.7% in the very good category with a percentage achievement of around 81% - 100% with a value scale of "4" and the results of validation from media experts with an average of 89.5% in the very good category with a percentage achievement of around 81% - 100% with a value scale of "4". This can be interpreted that material experts and media experts state that interactive multimedia-based learning media in the form of Nearpod applications in integrated thematic learning theme six subthemes of energy changes in grade III elementary schools are included in the "Very good" category to be used by students, especially grade III elementary schools. These results show consistency with the results of recent research, which fall into the category of feasible and practical and should be developed to encourage research.

Based on some of the literature reviews that have been presented, although research on the development of Nearpod-based interactive multimedia has been carried out, the subject criteria, focus of study, research variables, and analysis methods used are different from previous studies. Thus, the research topic that the researchers conducted is truly original and in accordance with the problems that exist in the field. Based on the problems that researchers find, the material that is still difficult for students to master is the diversity of Indonesian culture. The wide scope of this material made the researcher take the initiative to package it in the form of digital media so that it is more effective and in accordance with learning objectives. This Nearpod media was developed with the aim of providing interesting stimuli for students so that they can use their imagination when learning. The reason is that the presence of the latest technological media can make learning, teaching, and training in schools more effective (Chiu, 2023).

The involvement of Nearpod-based learning media is able to foster students' enthusiasm for learning and activeness, becoming a significant benchmark for achieving maximum learning outcomes (FH et al., 2021). Nearpod-based learning media not only creates positive interactions between students but also interactions between students and teachers. The interactive media developed helps teachers deliver material with an attractive design with a game-like appearance with additional images, audio, and video that are in accordance with learning needs so that it is easy for students to understand and helps develop digital competencies (Mills et al., 2022). Based on the description presented, the development of learning media, with the final result in the form of Nearpod media, has proven effective in improving the learning outcomes of social sciences content for grade IV elementary school students. This is evident from the increase in students' pretest and post-test scores, from 60 to 89.82. In addition, this media also received a material achievement value of 92.3%, while in the N-Gain test, there was an increase of 0.74 in the "High" category. This shows that the development of Nearpod-based media with the ADDIE model has proven to be feasible, practical, and effective in learning social sciences grade IV elementary school ngaliyan 01 Semarang, especially on the material of Indonesian cultural diversity.

CONCLUSIONS

Nearpod-based interactive multimedia was developed according to the needs of teachers and students. This media development design is in the form of slides with attractive colors, images, illustrations, and videos that support the content of the material. Nearpod media is also supported by quizzes and games and can be accessed for free anytime and anywhere. This research uses the ADDIE development model, starting from the analysis, design, development, implementation, and evaluation stages.

At the analysis stage, researchers conducted interviews with fourth-grade teachers, distributed questionnaires, and collected the necessary data. Furthermore, at the design stage, researchers designed product designs by considering the data obtained. The third stage is development. Researchers develop learning media that has been designed and validate it to media experts and material experts, then enter the product implementation stage and test its effectiveness with pretest and post-test questions. The last stage is the evaluation to determine whether there is an increase with the N-Gain test. Based on the feasibility assessment by material experts on Nearpod-based learning media, including very feasible criteria with an assessment percentage score of 90.62%. At the same time, the feasibility assessment by media experts includes very feasible criteria with an assessment percentage score of 95%.

Nearpod-based learning media is declared effective in the learning content of IPAS grade IV material on Indonesian cultural diversity. Based on the data obtained, the average pretest score obtained by students is 60, while the post-test results obtained a fairly high increase, namely with an average score of 89.82. Therefore, this media development can be declared effective because students experience an increase in learning outcomes from the pretest to the post-test after using Nearpod media. In addition, this media also gets a material achievement value of 92.3%, which means that 26 out of 28 students get scores above the KKTP set by the school, namely 75. With these results, the level of achievement of material understanding gets the "Very Good" category. While in the N-Gain test, there was an increase of 0.74 in the "High" category, so this media was declared effective in increasing the enthusiasm and achievement of student learning outcomes in the content of social sciences for fourth-grade students of elementary school ngaliyan 01 Semarang.

REFERENCES

Amalina, E. N., & Inayati, R. (2021). Pengembangan Media 'Economic Monopoly' Berbasis Game Untuk Mata Pelajaran Ekonomi Kelas X SMAN 1 Singosari. *Jurnal Pendidikan Ekonomi (JUPE)*, *9*(3), 129–137. https://doi.org/10.26740/jupe.v9n3.p129-137

Ami, R. A. (2021). Optimalisasi Pembelajaran Bahasa Indonesia Menggunakan Media Pembelajaran Berbasis Aplikasi Nearpod. *Bahtera Indonesia; Jurnal Penelitian Bahasa Dan Sastra Indonesia*, *6*(2), 135–148. https://doi.org/10.31943/bi.v6i2.105

Baalwi, M. A., & Aulia, U. (2022). Pengembangan Multimedia Interaktif Berbasis Nearpod Pada Tema 6 Subtema Perubahan Energi Kelas Iii Mi Roudlotul Mustashlihin Sukodono. *Jurnal Muassis Pendidikan Dasar*, *1*(1), 54–68. https://doi.org/10.55732/jmpd.v1i1.9

Cerya, E., Afdal, Z., & Susilowibowo, J. (2021). *MELDIGANSI (Media Pembelajaran Digital Akuntansi) Berbasis Android Bagi Siswa SMA understand the concept of theory and calculation simultaneously . In order for student so that they will interested in participating in the learning process . both online* . *4*(4), 559–567. https://ejournal.unp.ac.id/students/index.php/pek/article/view/12424/0

Chiu, T. K. F. (2023). The impact of Generative AI (GenAI) on practices, policies and research direction in education: a case of ChatGPT and Midjourney. *Interactive Learning Environments*, 1–17. https://doi.org/10.1080/10494820.2023.2253861

Elviana, D., & Julianto, J. (2022). Pengembangan Media Smart Apps Creator (SAC) Berbasis Android Pada Materi Suhu Dan Kalor Mata Pelajaran IPA Kelas V Sekolah Dasar. *Jurnal Pendidikan Guru Sekolah Dasar*, *10*(04), 746–760. https://ejournal.unesa.ac.id/index.php/jurnal-penelitian-

pgsd/article/view/46270

Fareza, H. I., & Zuhdi, U. (2022). Pengembangan Media Pembelajaran Interaktif Berbasis Nearpod dalam Materi Perkembangbiakan pada Tumbuhan Siswa Kelas VI Sekolah Dasar. *Educativo: Jurnal Pendidikan*, *1*(1), 291–299. https://ejournal.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/52388

FH, Y., Fatimah, S., & Barlian, I. (2021). Development of Interactive Digital Teaching Materials with a Contextual Approach in Microeconomics Theory Courses. *Jurnal PROFIT Kajian Pendidikan Ekonomi Dan Ilmu Ekonomi*, *8*(1), 36–46. https://ejournal.seaninstitute.or.id/index.php/InfoSains/article/view/4417

Jayanti, R., & Rosita, Y. D. (2019). Pengembangan Kompetensi Kebahasaan Dalam Menulis Teks Cerpen Sejarah Di Man 7 Jombang. *KEMBARA Journal of Scientific Language Literature and Teaching*, *5*(2), 245. https://doi.org/10.22219/kembara.vol5.no2.245-253

Kamilah, N., & Susanti, S. (2022). Pengembangan Media Pembelajaran Interaktif Berbasis Articulate Storyline pada Materi Administrasi Perpajakan dengan Kompetensi Dasar PPh 21 Kelas Akuntansi. *Edukatif : Jurnal Ilmu Pendidikan*, *4*(3), 3201–3213. https://doi.org/10.31004/edukatif.v4i3.2612

Kartini, Syamsuddin, N., Mustafa, Pamessangi, A. A., Nurmiati, Sukirman, Firman, Hasriadi, & Chaeril, M. (2022). Pelatihan Penerapan Media Inovatif Dalam Pembelajaran di Pondok Pesantren Putra Dato Sulaeman. *Madaniya*, *3*(4), 737–744. https://madaniya.pustaka.my.id/journals/contents/article/view/272

Mcclean, S., & Crowe, W. (2017). *Using the Cloud-based Audience Response System Nearpod to Promote Active Learning and Engagement in Lectures*. 27.

Měkota, T., & Marada, M. (2020). The influence of the Nearpod application on learning social geography in a grammar school in Czecha. *Education and Information Technologies*, *25*. https://doi.org/10.1007/s10639-020-10214-3

Mills, K. A., Unsworth, L., & Scholes, L. (2022). Literacy for Digital Futures. In *Literacy for Digital Futures*. https://doi.org/10.4324/9781003137368

Nurhamidah, D. (2021). Pengembangan Instrumen Penilaian Berbasis Media Nearpod dalam Mata Kuliah Bahasa Indonesia. *Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, 80–90.

Oktafiani, O., & Mujazi, M. (2022). Pengaruh Media Pembelajaran Nearpod Terhadap Motivasi Belajar Pada Mata pelajaran Matematika. *JPGI (Jurnal Penelitian Guru Indonesia)*, *7*(1), 124. https://doi.org/10.29210/022033jpgi0005

Perez, J. E. (2017). Nearpod. *Journal of the Medical Library Association*, *105*(1), 108–110. https://doi.org/10.5195/jmla.2017.121

Sugyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D* (Issue January).

Syofyan, R., & Husni, M. D. (2023). Pengembangan Media Pembelajaran Interaktif

Berbasis Nearpod Untuk Meningkatkan Hasil Belajar. *Jurnal Ecogen*, *6*(3), 422. https://doi.org/10.24036/jmpe.v6i3.15297

Wahid, R. N., & Cerya, E. (2022). Development of Android-Based Interactive Media Learning Economics Capital Market Materials. *Economic Education Analysis Journal*, *11*(1), 50–64. https://doi.org/10.15294/eeaj.v11i1.53713

Walidah, S. N. S. Z. (2023). Pengembangan Media Pembelajaran Interaktif Articulate Storyline pada Materi Mengubah Bentuk Energi Kelas IV Sekolah Dasar. *Ejournal.Unesa.Ac.Id*, *11*, 32–34. https://ejournal.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/52481%0Ahttps://ejournal.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/52481/42409

Zhao, W. (2022). Applying Nearpod to the Teaching Chinese as a Second Language class to Enhance Interactions and Collaborations in the Secondary Schools. *Proceedings of the 2021 4th International Conference on Humanities Education and Social Sciences (ICHESS 2021)*, *615*(Ichess), 1478–1483. https://doi.org/10.2991/assehr.k.211220.249