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Development of Nearpod Learning Media with Deep Learning Methods in Pencak Silat Courses

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Abstrak
This study aims to find out the development of Nearpod using the Deep Learning method in the pencak silat course. Knowing the feasibility of this learning media is based on the assessment of material experts, media experts and students. This type of research and development uses the ADDIE development model developed through five stages, namely Analysis, Design, Development, Implementation and Evaluation. At the Development stage, learning media using Nearpod is assessed for eligibility by material experts and media experts. The implementation stage goes through two stages, namely small group trials and field trials. The results of the study showed that the learning media using Nearpod the feasibility level of this learning media based on the assessment of material experts obtained an average of 4.80 which was included in the very feasible category, media experts obtained an average of 4.80 which was included in the very feasible category, and student assessment, obtained an average overall score of 4.89 which was included in the very feasible category. Based on the results of the research, the learning media developed is very feasible to be used as a learning medium in the Physical Education Study Program to improve straight kick skills in pencak silat courses.
Keywords*:* PE, Silat, Kick, Deep_Learning, Nearpod

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INTRODUCTION

Pencak silat is an important material to be taught, as evidenced by the inclusion of pencak silat in the physical education curriculum both at the elementary, secondary, high and university levels in the physical education study program (Sumantri, Nasuka, & Sulaiman, 2016). Straight kicks are one of the pencak silat kick techniques (Lihawa, Rafiater, & Hidayat, 2022). Straight kicks are basic kicking techniques that are able to provide initial movement techniques to learn other kicking techniques (Syamsuramel, Hartati, & Rahmadani, 2019). Straight kicks are the mainstay of athletes in matches because in addition to being easy to do this kick is also difficult for opponents to catch and straight kicks are quite high in the scoring score of a match (Ismawati, Ulfah, & Khadavi, 2020). Physical education as a holistic subject requires a learning method that is not only theoretical but also interactive and practice-based that is integrated with the use of technology (Indrawati, Sabrina, & Hidayat, 2024). The lecture and demonstration methods cannot provide an understanding to students to provide a good

overview of the series of techniques about straight kicks, so that students still find it difficult to practice straight kicks, which also causes student learning outcomes to not be optimal (Suryadin & Radiko, 2020). The development of technology has given rise to new learning methods that are in accordance with the needs and development of the times (Rifan Rahman Sutrisno, 2020).

Deep Learning is a learning method suggested by the government as conveyed by the Deputy Minister of Primary and Secondary Education (Ministry of Primary and Secondary Education, 2025), Atip Latipulhayat, when he was a speaker in a public lecture entitled "*Deep Learning* in Digital Era Education" held at the Auditorium of the Faculty of Education, Universitas Pendidikan Indonesia (UPI), on Monday, February 17, 2025. The public lecture was aimed at providing insight into the concept and implementation of *Deep Learning* in the world of education, especially in facing the challenges of the digital era.*Deep Learning* integrates mindful, meaningful, and joyful learning, which allows students to not only memorize but students are encouraged to explore, analyze, and integrate the knowledge they gain so as to create learning that not only focuses on academic achievement, but also character development and holistic learning experiences (Arif, Parawansyah, Huda, & Zulfahmi, 2025). Learning is said to be successful if learning is effective, efficient and achieves the targeted goals, the factor that affects the achievement of learning targets is the teacher's ability to determine learning methods and media (Wuarlela, 2020).

Media is used in learning so that the message conveyed can be conveyed to the recipient of the message and can provide motivation to students (Khomarudin, Efriyanti, & Tafsir, 2018). *Nearpod* interactive learning media features interactive quizzes, entering questions for long answers, memory tests, filling in dots, and answering questions with pictures (Minalti & Erita, 2021). The development of *Nearpod* with *the Deep Learning* method in physical education, especially in straight kick materials, is inseparable from the curriculum implemented both in schools and universities. *Nearpod* with *the Deep Learning* method on straight kick material in pencak silat courses is expected to provide students with an understanding of straight kicks and students are able to practice straight kick skills so that they can improve student learning outcomes.

METHOD

The research method used in this study is the research and service method (*Research and Development*), this research is used to produce certain products and test the effectiveness of these products (Sugiyono, 2017). The product produced in this study is *Nearpod* as a learning

medium used with *the Deep Learning* method in the straight kick material of the pencak silat course. The approach model used in this study is the ADDIE model which includes 5 stages, namely Analysis, Design, Development, Implementation and Evaluation (Vivien Pitriani, Wahyuni, & Gunawan, 2021).

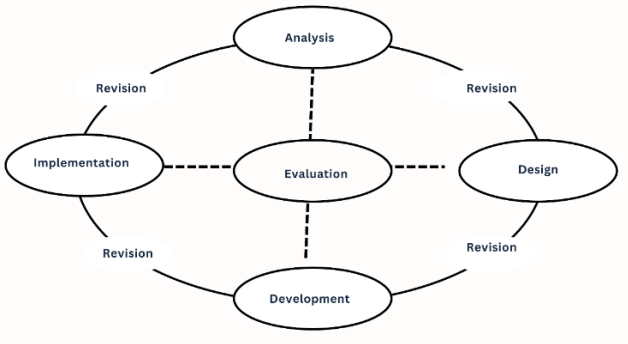

Figure 1. ADDIE development stages

The following are the stages of ADDIE model media development, which are as follows:

1. Analysis

The analysis stage of the researcher conducted an assessment of the need for physical education, especially on the material of straight kicks in pencak silat. The assessment includes the identification of problems and student needs for *Nearpod* related to mistakes that often occur in performing straight kick techniques so that the material contained in *Nearpod* is in accordance with the characteristics and needs of students which can later improve students' understanding of straight kicks so that they can improve their straight kick skills.

2.Design (Design/Design)

In the design stage, the researcher begins by formulating learning objectives, formulating the elements needed to achieve these goals. The design of this conceptual model is based on the findings of the analysis. The design stage designs the straight kick material on *Nearpod* according to the needs and characteristics of students. The results obtained at this stage were also formed a *Nearpod prototype* with the DeepLearning method on pencak silat straight kick material.

3.Develoment

The development stage carried out several activities such as: searching and collecting various relevant sources to enrich and strengthen the *Nearpod* design with *the Deep Learning method* on pencak silat straight kick material. Furthermore, development includes activities of validating draft product development and revision after input from experts.

4.Implementation

The implementation was carried out after getting decent results and was ready to be used in the field based on the assessment of material experts and media experts, *the Nearpod* trial was carried out on students of the Unsam Physical Education study program who took the pencak silat course, as well as the lecturers who took the pencak silat course to try how Nearpod affects student learning outcomes on straight kicks.

5.Evaluation

Assessments from students, lecturers, and experts will be the result of how *Nearpod* affects the improvement of student learning outcomes on straight kicks.

The research was conducted at Samudra University in March – August, the research subjects were students of the physical education study program of Samudra University who took pencak silat courses totaling 60 people while the sample was taken as many as 45 people with sample determination using random sampling techniques which were divided by 15 students in the small skla trial, 35 students in the field trial, material experts and media experts. The instruments used were questionnaires, observations and documentation.

Equations and formulas

The technical data analysis uses the Likert Scale, which is to change qualitative data to quantitative with the provision of the score can be seen in table 1 below:

Table 1. Score Table

Score	Category
5	Highly Worth It
4	Proper
3	Quite Decent
2	Not Eligible
1	Highly Unworthy

To calculate the average score of each aspect of the assessment of material experts and media experts, the formula is used:

$$\text{Red } (\bar{x}) = \frac{\sum x}{N}$$

Information:

$\bar{x}$: Average score

$\sum x$: Total Score

N : (Respondent × Indicator)

The percentage score results obtained from the study are interpresented in the following table criteria:

Table 2. Learning Media Qualification Scale

Presentase	Criterion
x > 81%	Highly Worth It
61% < x ≤ 80%	Proper
41% < x ≤ 60%	Quite Decent
21% < x ≤ 40%	Less Worthy
x ≤ 20%	Very Less Worthy

RESULTS AND DISCUSSION

Results

Development *Nearpod* by the *Deep Learning* in the pencak silat course using research and development methods with the ADDIE model, namely:1). Analysis; 2). Design; 3). Development; 4). Implementation; 5). Evaluation. The five stages of development will be described below:

1. Analysis Stage

At the analysis stage, the researcher conducted observations and interviews with students of the Physical Education Study Program, Universitas Samudra Semester IV. The observation was carried out on March 18, 2025. The number of students present was 30 students. Based on an interview with a lecturer in the Pencak Silat course, regarding the straight kick technique, it is known that the straight kick is one of the important basic techniques as an initial technique before learning various kinds of kick techniques, it is known that there are still many students who are not skilled in doing straight kicks, judging from the movements made. The learning process is carried out only based on the instructions of lecturers and peers so that there is a lack of additional media to facilitate students in understanding straight kick techniques. Learning activities that tend to be monotonous result in students being less excited, and less able to understand straight kick skills that can help improve straight kick skills.

2. Design Stage

The design is based on observational findings that include mistakes that often occur when hitting straight shots. At this stage, the researcher collects information that supports the development of the learning media created. The results of the information are:

a. Designing *the Nearpod* Design Concept as a Straight Kick Learning Media Using *the Deep Learning Method*

Nearpod contains an overview of the interactive learning media that will be loaded into a learning medium containing pencak silat straight kick material. In general, the parts of Interactive Learning Media Using *Nearpod* can be described as follows:

1). Login or Code sent by the Lecturer

2). Fill in personal data

3) Conduct Learning by following the slides that have been compiled by the Lecturer.

At this stage, students follow the instructions of the stages directed by the Lecturer, with the following slide details:

a). Collaboration Board

The initial view on *Nearpod* contains collaborative board slides, the collaboration board contains opinion presentation slides by students on the difference between pencak silat kicks and soccer kicks. Opinions expressed by students on the collaborative board will appear on the device display of all students, and each student can give a response or reaction by clicking love on the chat bubble that appears on the collaborative board.

b). Picture of doing a straight kick at the initial stage

The second slide contains an overview of the material of doing a straight kick in the initial stage containing 3 initial stages, namely: (1) standing with both legs shoulder-width apart, (2) horses with one leg in front, (3) position of both hands in front of the chest and looking ahead.

c). Picture of doing a straight kick at the execution stage

The third slide contains an overview of the material of doing a straight kick in the implementation stage containing 3 stages of implementation, namely: (1) lifting the knees of the back leg forward, (2) doing a straight kick with the target forward (3) one hand is on the chest and one hand is between the legs to protect the vital parts.

d). Picture of doing a straight kick at the end stage

The fourth slide contains an overview of the material of doing a straight kick in the implementation stage containing 3 stages of endings, namely: (1) the legs used to kick are pulled back, (2) the posture of both hands back in front of the hand (3) the stance of the stance of the horses returns to the initial stance

e). Video display of the execution of straight kicks from the beginning, execution and end stages.

The fifth slide contains a video containing the movement of doing a straight kick from the start, execution and end stages

f). Picture matching game

In the sixth slide contains the game of matching pictures, the images displayed aim to remember the movements at each stage.

g). image display of mistakes that are often made when making straight kicks

The seventh slide contains an overview of the material of mistakes that are often made when doing straight kicks, the mistakes that are often made include: (1) imperfect stance positions (2) knees not raised (3) untargeted kicks (4) lack of explosive power.

h) video display of frequent mistakes on straight kicks

The eighth slide contains a video display of 4 mistakes that are often made when making straight kicks.

i). game fill in the blanks

On the ninth slide containing the fame of empty words, this game aims to revisit the mistakes that are often made when making straight kicks.

j). video view Exercises to correct errors of imperfect stas and not lifting knees

The tenth slide contains a video of exercises to correct the mistakes of imperfect horses and not lifting the knees, the exercises carried out include doing straight kicks with the obstacle of the chair in front.

k). Video display Exercises to correct errors not on target

On the eleventh slide contains a video of exercises to correct mistakes that are not on target, the exercises carried out include doing straight kicks with the goal of the foot ball.

l). Video display Exercises to correct the error of lack of explosive power

On the twelfth slide contains a video of Exercises to correct the mistake of lack of explosive power, The exercises carried out include doing a straight kick with the goal of a foot ball/balloon that is thrown up.

m). game time to climb

On the thirteenth slide, containing multiple choice games, the game contains 5 multiple-choice questions to reinforce the straight kick material.

3. Development Stage

The third stage is the development stage which includes product manufacturing, feasibility testing by material experts and media experts, and product revision. At this stage, the researcher creates an interactive learning medium, all components such as background design, images, characters, navigation buttons, audio, material materials and questions are prepared using *the Nearpod* that has been created in the previous stage. After *Nearpod* is completed, it will be tested for feasibility by material experts, media experts and media users

(students). The assessment from the subject matter expert includes both material and learning aspects. The following are the results of the validation of the material experts:

Table 3. Subject matter expert validation results

Yes	Assessment Aspects	Score Score
1	Material	4.60
2	Learning	5.00
	Average	4.80

The feasibility test from media experts includes aspects of appearance, convenience aspects and relevance aspects. The following are the results of the validation of media experts:

Table 4. Media expert validation results

Yes	Assessment Aspects	Score Score
1	Display	4.80
2	Facilities	4.50
3	Relevance	4.50
	Average	4.80

4. Implementation Stage

The implementation stage is carried out in two stages, namely: the small group trial stage and the field trial stage. The subjects of the small group trial were 15 students of Semester IV of the Physical Education Study Program, Universitas Samudra. This trial was conducted to determine the feasibility of the developed media and to find out students' opinions about interactive learning media using *Nearpod*. The small group trial includes media aspects, materials, and benefit aspects. The following are the results of student assessments

Table 5. Results of user assessment (Students) of Small Scale Trial

Yes	Assessment Aspects	Score Score
1	Media	5.00
2	Material	4.80
3	Benefit	4.30
	Average	4.75

The next stage is a field trial, a field trial is carried out on Semester IV students of the Physical Education Study Program, Samudra University. The researcher prepares learning media that will be used on the laptops that have been provided. Students operate learning media developed by researchers. At the end of the lesson, students were asked to respond to the learning media by filling out a questionnaire distributed by the researcher. The feasibility assessment in the field trial includes media aspects, material aspects and benefit aspects. The following are the results of student assessments.

Table 6. Results of user assessment (Student) Field Trial

Yes	Assessment Aspects	Score Score
1	Media	5.00
2	Material	4.80
3	Benefit	4.30
	Average	4.75

5. Evaluation Stage

At the evaluation stage, a comparison of the feasibility of small group trials and field trials was carried out and a feasibility analysis of learning media was carried out. At the comparison stage, the trial includes media aspects, material aspects and benefit aspects. Based on the results of the two stages of the trial, an average score of 4.89 was obtained, including in the X > 4.00 category of "Very Feasible". The feasibility analysis of learning media was obtained from the results of the feasibility test from material experts, the feasibility test from media experts, and the feasibility test from students. Assessment of media feasibility by material experts based on material aspects and learning aspects. Aspects evaluated by media members include appearance, convenience and relevance aspects. Students also provide assessments related to material aspects, media aspects and benefit aspects. Trial on students to assess based on material aspects, media aspects and benefit aspects. The results of all stages of research ranging from material experts, media experts, learning practitioners, small group trials and field trials were obtained in the category "Very Feasible" for Interactive Learning Media Using *Nearpod* in the Physical Education Study Program, Samudra University.

Discussion

Research that has been conducted proves that the development of interactive learning media using *Nearpod* is very feasible to be used as a learning medium for students of the Physical Education study program at Samudra University on straight kick material.

The results of the research obtained are in line with the results of the research conducted (Fajar, Woro, Handayani, & Yudha, 2022) The research conducted proves that *Nearpod* able to increase the effectiveness of learning, then research (Panduwinata & Az-Zahro, 2024) Research conducted shows that *Nearpod* has a positive impact on the teaching and learning process, such as: increasing interactive learning, positive student attitudes, and learning outcomes, and finally the research conducted (Prasetyo & Andayani, 2024) The research conducted proves that *Nearpod* provide a significant influence on students' knowledge and improvement in the skills taught.

The *Nearpod* application has quite complete features, ranging from inserting images, inserting videos, and even inserting games. Another uniqueness and completeness of *Nearpod* lies in the ability to insert a test sheet in the form of evaluation questions, for example multiple choice, true and wrong and complete with the evaluation results. Lecturers can create materials, insert questions and include an educational game in the program or percentage sheet which can ultimately optimize the learning process and greatly help improve students' straight kick skills.

CONCLUSION

Based on data analysis and discussion of research results, it can be concluded that the development of the ADDIE model in the Development of *Nearpod* Learning Media using *the Deep Learning method* in pencak silat courses, is carried out in 5 stages, namely: The analysis stage is the initial stage for the analysis of student needs and the analysis of the material for the learning media to be developed. The design stage consists of designing learning design concepts, creating materials, questions and answer keys. The development stage includes the creation of learning media, feasibility assessment by material experts and media experts. The learning media that has been created based on the results of revisions from expert advice, the Interactive Learning Media Using *Nearpod* using *the Deep Learning* method in pencak silat courses is ready to be implemented.

The implementation stage consisted of a small group trial (15 students) and a field trial (30 students). The evaluation stage is carried out by comparing the results of the trial stages and recapitulating the results of assessments from material experts, media experts, and students.the results of the feasibility test from material experts, media experts, and students, all obtained results in the category of very feasible for pencak silat straight kick learning media. The *Nearpod* application has quite complete features, ranging from inserting images, inserting videos, and even inserting games. Another uniqueness and completeness *of Nearpod* lies in the ability to insert tests in the form of evaluation questions, for example multiple choice, true and wrong and complete with the results of the evaluation. Lecturers can create materials, insert questions and include an educational game in the program or percentage sheet which can ultimately optimize the learning process and greatly help improve students' straight kick skills in pencak silat courses.

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