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Development of Integrated Thematic Electronic Worksheets With RADEC Learning Model Using Nearpod Application

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Abstract
This research was motivated by that LKPD in schools is still in the form of handouts that are printed by teachers and distributed to students. The purpose of this research is to produce E-LKPD products using the RADEC-based Nearpod application. This type of research is development research with the ADDIE development model. Research instruments in the form of interviews, questionnaires, tests, and documentation. The research results obtained were Integrated thematic E-LKPD assisted by the RADEC-based Nearpod application in the elementary school stated in the very valid category. In the practicality questionnaire for the teacher's response score and the score for the student's practicality questionnaire in the very practical category. On the effectiveness used the N-Gain score percent test with the effective category. So, it can be concluded that the developed ELKPD has fulfilled the categories of valid, practical, and effective to improve student learning outcomes.

Kata Kunci: *E-LKPD, Nearpod, RADEC*

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Introduction
Integrated thematic learning is a concept that is connected with other concepts that are carried out in a planned or spontaneous manner, which involves learning activities starting from one subject or theme that is linked to other subjects or themes. This can be done in one or more fields of study with various learning activities. Implementation of integrated thematic learning in elementary schools aims to help students focus more on a theme because the material is presented in a clear context, deepens their knowledge of cross-subject themes, and develops basic skills (Armady, 2017).

For students to successfully complete learning objectives, teachers and schools must be able to build complete infrastructure and learning models. Teachers must also have the ability to design educational activities(Amini, R., & Saniyah, 2021). Learning activities must be student-centered, with students acting as learning subjects who should actively develop themselves. The learning process must also be active, participatory, and collaborative (Elfia

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Sukma, et al 2017). Teachers must master teaching and learning plans to increase the quantity and quality of teaching and learning. The lesson plan must be used by the teacher as a guide and benchmark for implementing the learning process. Because of this, Skill 21 has several features that require learning to apply Technology (Pratiwi, 2021).

Teachers play a very important role in providing feedback to students in learning. This is because the teacher has a very complex task, namely guiding and assisting students in learning to generate activities that can grow and improve student interest in learning (Simbolon, 2014). In general, assignments given by teachers to elementary school students are given with student worksheets in the form of printed sheets or assignments in the form of filling out LKS books. For that, it is necessary to include technological developments in it. One of them is the use of E-LKPD or often known as electronic student worksheets. The use of E-LKPD in learning can make learning more organized and comfortable. In addition, with the use of E-LKPD, the effectiveness of learning has also increased (Rosa Andria, et al 2020).

The Nearpod application is an online information tool that can be used as an alternative to making E-LKPD for learning. This web-based program called Nearpod allows students to engage in interactive learning. With materials, quizzes, learning films, and evaluations, schools can support active learning in these situations. This program is easily accessible to both teachers and students (Sarginson and McPherson, 2021). In addition, the learning paradigm has an impact on students when they are involved in learning activities. The learning model is an example of a form of learning, which describes the PBM model from the beginning to the end of the learning activity (Anida, 2021)

Research using the Nearpod application was previously carried out by Ilyas in 2022 with learning outcomes with the Nearpod application helping to build and develop student interest in learning, leading to greater attention and student involvement. Badriyah in 2021 has also conducted research with this nearpod application with learning outcomes using the nearpod application increasing students' critical thinking skills. So it can be concluded that the use of the nearpod application is very good for learning activities.

The RADEC model is one of the learning activities that can involve students in learning activities and inspire students' ideas. The RADEC model is a learning strategy that allows students to achieve high standards, actively participate in self-learning, improve communication and teamwork skills, and support other students in understanding the content. The tasks in this learning paradigm are gradual and take little time (Primary, YES, Sopandi, W., & Hidayah, 2019). This radec learning makes students active in learning as evidenced by Ari Novendra's research in 2021 with increased motivation and learning outcomes of students after using the radec model.

Researchers conducted a preliminary analysis of two elementary schools in the city of Bukittinggi to see the situation on the ground. The introduction includes an examination of problems and the needs and characteristics of students. The findings from these observations indicate that students are less involved in learning activities, and they do is only copying information or material from the teacher. This problem was also discovered by Ismail, R., Rifma, R., & Fitria, 2021 that students only accept what is explained by the teacher and students have not been accustomed to digging up information from readings in books. As a result, there are few opportunities for students to actively engage with the material they are studying or to demonstrate their understanding of the material.

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The observation results show that teachers use LKPD to carry out learning activities, but there are limitations to students using LKPD. LKPD in schools places more emphasis on questions and filling in questions, and there has not been an increase in students' abilities in them. The LKPD used in the majority of the class is in the form of questions that require conceptual knowledge so that student work on LKPD only contains content responding conceptually. LKPD is usually only used as a tool to improve student learning, not as a tool to improve student competence. LKPD is still distributed in classrooms through printed handouts distributed by teachers. The researcher also conducted interviews with teachers and found out that the current LKPD only has a name and class and does not have an LKPD identity. LKPD will be meaningful for students if it is made with the technology that is developing at this time and is as attractive as possible and is designed according to a learning model that can increase students' activeness in learning. LKPD when combined with technology will become ELKPD or electronic student worksheets.

Researchers have conducted research studies that are in line with what researchers have done, including the research conducted Elijah in 2022 that the Nearpod application can make learning more focused. Research conducted by Rose in 2020 that is E-LKPD is very helpful in understanding material about texts and research conducted Rahmia Year 2021 the results of learning using the RADEC model can improve students' thinking skills. This research has an update from previous research as seen from the E-LKPD which has never been made with the Nearpod application and combined with the RADEC learning model which has never been done by other researchers. Learning combined with technology and students participating actively in learning makes students eager to learn. Learning that develops students' ideas and creativity can make students easily understand learning. This nearpod application can help students to direct the learning process to be interesting and provoke students' ideas. combined with the RADEC learning model. The RADEC learning model is a learning model that uses its stages as the name of this model itself, namely Read, Answer, Discuss, Explain, and Create. So the researchers carried out learning with the RADEC step which was applied in ELKPD to hone students' understanding. Therefore, researchers are interested in analyzing the feasibility of E-LKPD using the RADEC-based Nearpod application in the third grade of elementary school.

Methods

This research is research in the context of development R&D. This research has a goal to create a product that is valid and practical. An integrated thematic E-LKPD using Nearpod based on RADEC for third-grade elementary school students is the result of this study. This study uses the ADDIE model, which has five stages, namely analyzing, designing, developing, implementing, and evaluating (Branch, 2009). The ADDIE approach was used by researchers for this research because it not only implements the product in the field but also incorporates product evaluation throughout the development process. ADDIE model is a process that serves as a guiding framework for situations are complex and very suitable for developing educational products and learning resources other(Yuliana Nasrullah dkk, 2021).

Data collection techniques used in this study were interviews and documentation. Interviews were conducted by interviewing the teacher to find out more in-depth things about the difficulties in delivering the material learning. Data collection during observation was obtained through the observations made by researchers and teachers using the checklist model observation sheet instrument. Documentation at the time of data collection was in the form of writing, photos, and videos to support this research.

The validity of learning media products in the form of ELKPD using the nearpod application was obtained from 4 lecturers and 1 teacher validator.

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Table 1. Percentage and Interpretation Criteria Score

Percentage	Criteria
81 -100	Very valid
61 – 80	Valid
41 – 60	Sufficiently valid
21 – 40	Less valid
0 - 20	Very inValid

(Riduwan,2012)

Meanwhile, practicality was measured by questionnaires distributed to teachers and grade 3 elementary school students, and effectiveness was carried out in three elementary schools. Effectiveness is measured by an evaluation test in the form of multiple choice questions that have been prepared by the learning theme 6 sub-themes 1 for grade 3 elementary school.

In this research, method analysis of the data was taken to find out how student learning outcomes after learning with ELKPD using effectiveness analysis. Trials on effectiveness were obtained from the results of the pre-test and post-test. The data is analyzed using two different test analyses on average using Microsoft Excel.

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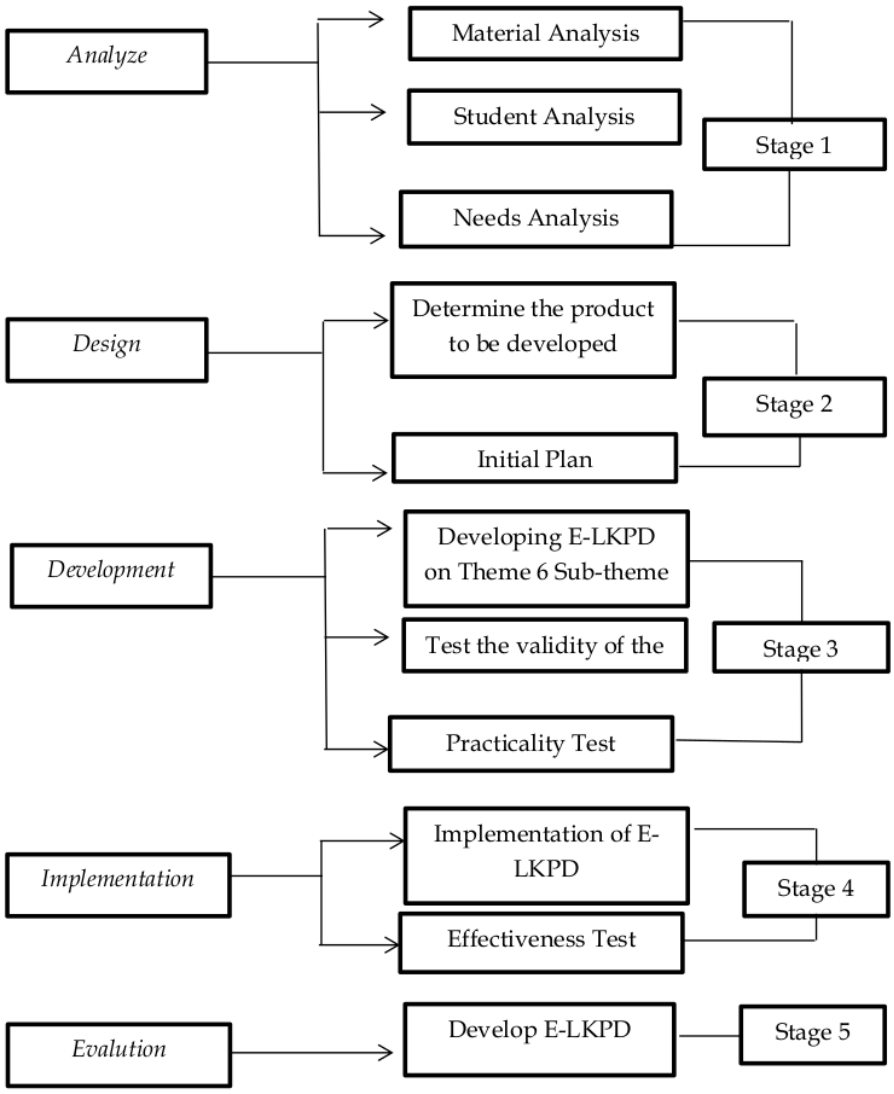
The research design is described clearly in Figure 1. design procedure research below:



Results and Discussion

Based on the facts and problems found in the field, the researchers conducted research by developing an integrated thematic E-LKPD using the RADEC-based Nearpod for fifth-grade elementary school students with the ADDIE development model (Branch, 2009):

Analyze

The analysis was based on information obtained from interview guide sheets, observation sheets, and questionnaires for the needs of teachers and students in two grade III classes. After carrying out initial investigations in the two elementary schools, the researcher analyzed the students and found several obstacles, including that students were less

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involved in their learning and only recorded information or material from the teacher in their activities. Teachers use LKPD in learning activities, but there are limitations to how students can use it because the LKPD used in elementary schools only consists of questions and answers, and there is no clear improvement in students' abilities in it. The following are the results of interviews between researchers and teachers:

Table 2. interview with the teacher

No.	Questions	Answers
1.	What difficulties did you experience in the learning process?	Not a difficulty, perhaps one of the obstacles faced was students who lacked concentration on reading and understanding the material because students tended to chat during learning activities.
2.	Are the students active during the lesson, teacher?	Some are active, some are not. However, it tends to be inactive because students only record information or material from the teacher.
3.	Have you used LKPD in integrated thematic learning?	Already.
4.	When you carry out thematic learning in one study which consists of 3 subjects, do you use learning worksheets for the 3 subjects?	No, LKPD is used only in one subject or two. And have never used learning worksheets for 3 subjects.
5.	Have you ever made an E-LKPD that can be used individually by students where the E-LKPD contains KI, KD, learning objectives, materials, learning videos, and evaluation	Never.
6.	What do you think if we use the E-LKPD in learning theme 6?	I think that's great. For renewal of students in learning. E-LKPD may be liked by students because it attracts students' attention and can also increase students' willingness to read.

Meanwhile, for the observation results with the checklist sheet, it can be concluded that the teachers in the elementary school have used LKPD for learning, but only printed LKPD have been provided by the teacher, and have not used technology in learning. Meanwhile, for the learning model, the teacher has not used a learning model that attracts students' interest in learning.

Technological developments in the field of life make learning also have to innovate in today's digital era (Agung et al, 2022). Researchers developed integrated thematic E-LKPD with the help of the RADEC-based Nearpod application to meet the learning needs of the

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21st century to address problems in schools based on the findings of student analysis and needs analysis. In addition, researchers also conducted material analysis including analyzing KI, KD, indicators, learning objectives, and learning materials. The material developed in this study is Theme 6 "energy and change ", Sub-theme 1 "energy sources" as many as six lessons.

Design

Learning with the Nearpod application helps teachers to provide interactive reinforcement to students regarding learning. The Nearpod application encourages students to take an active part in learning, and teachers and students can exchange experiences in learning activities (Mofeed et al, 2022). The development of the E-LKPD with the help of the Nearpod application based on RADEC material based on the suitability of KI and KD with the 2013 Curriculum content standards combined with teacher books and student books used in learning activities is the last step in this process. E-LKPD consists of several components, including titles, study instructions, as well as main materials, supplementary data, and work activities or processes (Asmaranti, 2018).

Development

Material Validation

The data from the material validation test was generated from three people who are material experts, namely two lecturers and one elementary school teacher. The validation questionnaire sheet is the tool used. The validator examines material aspects as well as integrated thematic E-LKPD with the help of the RADEC-based Nearpod application.

Table 3. Results of the Validation Test for the category of Material Aspects

The validator in the Material category Expert	Percentage(%)
I	93
II	95
III	93
Total Percentage(%)	281
Average Percentage(%)	93
Category	Very Valid

The integrated thematic E-LKPD using the RADEC-based Nearpod application developed by researchers is feasible to use and tested for its feasibility in this material aspect, indicated by the average percentage of material validation (based on the data mentioned above), which is 93% included in the very valid category.

Language Validation

Assessment and validation of products from linguists, namely a lecturer who is a linguist. Researchers used a language validation questionnaire as a research instrument. The results of linguistic validation of the E-LKPD obtained a value of 95% with a very valid category. It

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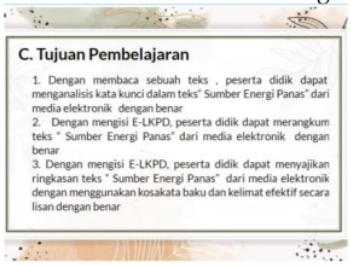
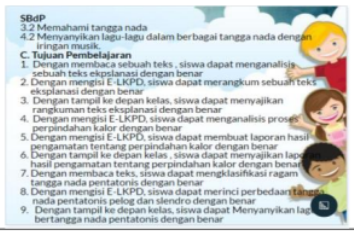
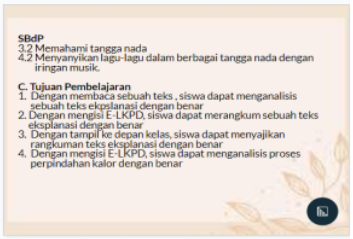
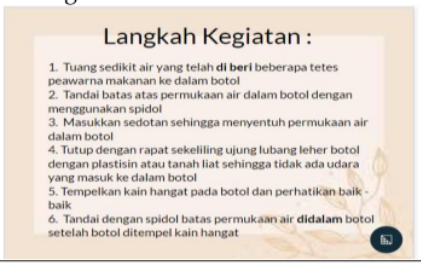
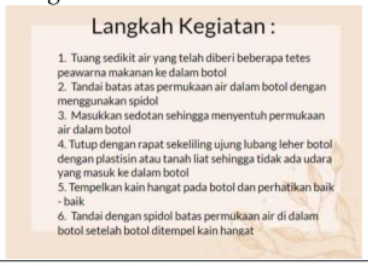
can be concluded that the integrated thematic E-LKPD using the RADEC-based Nearpod application that the researcher developed is feasible to use and has been tested for its feasibility in terms of the language aspect.

Media Validation

Product evaluation and validation are obtained from linguists, namely a lecturer who is a linguist. Researchers used a media validation questionnaire as a tool. The integrated thematic E-LKPD supported by the RADEC-based Nearpod application made by researchers can be used practically and has its validity validated, as can be seen from the findings of the language validation this E-LKPD gets a score of 85% in the very valid category. The following is the revised revision of the ELKPD provided by the validator :

Table 4. ELKPD design revision

No.	Improvement Suggestions	Repair Results
1.	The slides are too full of text and too tight	The slide is not too full and meetings 
2.	The background should not be too crowded 	The background has been changed and it's not too crowded 
3.	Pay attention to the conjunction "in" in writing E-LKPD 	The conjunction “in” has been corrected according to EBI 
4.	The color selection on the E-LKPD background should be chosen as attractive as possible.	The background color has been changed to make it more attractive to students.

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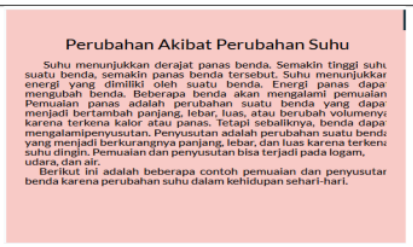

Implementation

In the implementation phase, the researcher conducted trials of the integrated thematic E-LKPD with Nearpod based on RADEC after the integrated thematic E-LKPD product had been through the validation and revision process and declared valid and feasible to be tested. The researcher conducted a small group trial of third graders at two elementary schools and a large group trial of third graders at one elementary school.

The development of E-LKPD with the RADEC learning model enables teachers to trigger student-centered learning. The RADEC learning model also encourages students to actively participate in the learning process and provides them with a meaningful process. (Muhammad Erwinto et al, 2021). This concept is in line with the initial goal of developing this learning model, namely to overcome the problems of students who are less active in learning. The results of the researcher's practicality test assessment during the trial were as follows:

Table 5. Result of The Teacher Practicality Test

Use of Class III Teachers	Percentage(%)
Teacher at SD I	89
Teacher at SDN II	92
Teacher at SDN III	92
Total Percentage(%)	272
Average Percentage(%)	91
Category	Very practical

Table 6. Student Practicality Test Result

Users (Class III Students)	Percentage(%)
Student at SDN I	85
Students at SDN II	89
Student at SDN III	91
Total Percentage(%)	265

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Average Percentage(%)	88
Category	Very practical

Both from the point of view of teachers and students, the level of practicality is very practical with a score of 91% from the teacher's point of view and 88% from the student's point of view. It can be said that the Nearpod application developed by RADEC and disseminated by E-LKPD is very practical and suitable for elementary school third-grade students. This is an appropriate opinion Nufus in 2018. E-LKPD is useful because it can be accessed from anywhere using a smartphone or computer, and students can immediately answer questions and see their grades.

Evaluation

At this stage, the researcher evaluates the process from analysis to implementation, one of the four steps of the ADDIE process. This action is intended to perfect the E-LKPD. This step can be identified by analyzing the validator's suggestions for the E-LKPD made. The three validation components are material, language, and media. The suggestions and input are as follows:

Table 7. Integrated Thematic E-LKPD Evaluation Result

No	Aspects assessed by the validator	Advice or input obtained from experts
1.	Material	1. Adjust the material based on the indicators in the lesson plan 2. Adjust the procedure for writing E-LKPD 3. Add an interesting picture in the explanation of the material
2.	Language	1. Pay attention to the type of font that is easy to read and attractive to students, a bright background, and use standard and effective sentences according to the EYD
3.	Media/graphics	1. Give variations on the size of the letters 2. Replace the background with a cool eye color

An integrated thematic E-LKPD using the RADEC-based nearpod application is the final result of this study. The product design is made according to the manufacturing structure. To improve the quality of learning, make students happier, and make students not bored during learning, this E-LKPD can help teachers and students in integrated theme learning procedures in third grade of elementary school. The opinion Riana in 2019 is that the use of interesting E-LKPD in learning activities can encourage an increase in students' learning motivation.

Therefore, testing is needed to make the product being developed into a quality product, namely to assess its validity, practicality, and effectiveness. This test It is very important to take this test. Before being tested in the third grade of elementary school, a validity test was carried out by utilizing the RADEC-based nearpod application to measure the quality of the

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integrated thematic E-LKPD. An M.Pd-educated teacher who teaches in elementary school and two lecturers at act as experts who validate the products that researchers develop. The validator filled out a questionnaire that had been provided by the researcher as part of the validation process. Experts in the fields of language, media, and materials act as research validators. The validators provided ratings as well as comments and suggestions on the E-LKPD that the researchers developed.

Validation results are collected to see the validity of a product, indicating that the product being developed meets the validity requirements for both graphics/media, including appearance, sound, visual animation, and operation, as well as the language and materials used. The study of the results of the questionnaire in this media validation showed that the media validation value was obtained at 85%, including the title very valid. The value of the material aspect is 92%, and the language aspect is 90% which is also stated to be very valid. Based on the results of the teacher and student response questionnaire after using the integrated thematic E-LKPD using the RADEC-based Nearpod application, a practicality analysis was carried out to evaluate the practicality of the E-LKPD. The results obtained are:

a. Teacher Response Questionnaire
   Questionnaires are used to be able to assess the usefulness of the E-LKPD, its usefulness, and attractiveness. Based on the results of the practicality of the three teachers, the average score given by teachers to the integrated thematic E-LKPD by utilizing the RADEC-based nearpod application was 91%. The results of teacher responses to the integrated thematic E-LKPD utilizing the RADEC-based nearpod application were achieved in the very practical category based on predetermined product assessment classification guidelines.
a. Student Response Questionnaire
   To evaluate the value of learning tools in terms of use, usability, and aesthetics of E-simplicity LKPD, student response questionnaires were used. The average score of student answers to the E-LKPD used is 88%. The reaction of students when learning the developed E-LKPD met the very good criteria, by the categorization rules of the developed learning tools.

Test the effectiveness of which the data source obtained from student learning outcomes using the Pre-test and Post-test instruments, namely before and after participating in the learning process using the ELKPD using the RADEC-based nearpod application. The product developed is said to be effective if the aspect of assessing student learning outcomes obtains 85% completeness or above the KKM (Minimum Completeness Criteria). To be able to find out the effectiveness of ELKPD using the RADEC-based nearpod application in elementary school integrated thematic learning on learning outcomes, for this reason, the researcher conducted a Pre-test and Post- this test in three elementary schools following the results of the N-Gain Score analysis which can be seen in the table below:

Table 8. Recapitulation of Pre-test and Post-test & results of N–Gain Score analysis

No	School name	Pre-Test	Post-Test	N-Gain Score	Category	N-Gain Score percent	Category
1	SDN I	52	88	0.75	High	75.25	Effective
2	SDN II	57	90	0.76	High	76.12	Effective
3	SDN III	60	91	0.77	High	76.70	Effective
AMOUNT		170	268	2.28		228.08	
AVERAGE		56.53	89	0.76	High	76.03	Effective

Based on the explanation above, it can be concluded that integrated thematic E-LKPD using the researcher's application which is an integrated thematic E-LKPD using the RADEC-based Nearpod application can improve student learning outcomes. The E-LKPD used is made according to the RADEC syntax. The RADEC learning model encourages students to increase awareness of sustainability (knowledge, attitudes, and behavior) and develop various 21st-century skills such as critical, creative, collaborative, and communicative thinking, as well as foster environmentally friendly attitudes and behaviors in everyday life(Hana Lestari et al, 2022). This E-LKPD can make it easier for students to understand the subject matter and help students understand electronic learning material that can be used with computers, notebooks, smartphones, or mobile phones. E-LKPD can also help students gain confidence in solving problems.(Agus & Suparman, 2020). So it can be concluded that this research strengthens the research that has been done before. Learning with ELKPD using the radec learning model is valid, practical, and effective and can increase students' interest and activeness in learning activities.

Conclusion

Learning using the ELKPD assisted by the nearpod application based on the Ratec learning model is valid, practical, and effective for third-grade elementary school students. Implementation of learning with ELKPD makes students more interested and active in learning activities. Student learning outcomes also increase after learning with ELKPD compared to before learning using ELKPD.

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References

Purnama,A & Suparman. (2020). E-LKPD Berbasis PBL untuk Meningkatkan Kemampuan Literasi Matematis Peserta Didik. *Jurnal Kajian Pendidikan Matematika*, *6*(1). https://doi.org/ 10.36681/tused.2022.117

Amini, R., & Saniyah, S. (2021). Pengembangan Modul Pembelajaran IPA Berbasis Picture And Picture di Sekolah Dasar. *Jurnal Basicedu*, *5*(2), 835–884. https://doi.org/10.31004/basicedu.v5i2.769

Anida, D. E. (2021). Pengembangan Model Pembelajaran Saintifik Berbasis Kearifan Lokal untuk Perkembangan Kognitif Anak Usia 5-6 Tahun. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *5*(2), 1557–1565. https://doi.org/ 10.31004/obsesi.v5i2.898

Armadi, A. (2017). Pendekatan scientific dalam pembelajaran tematik terpadu di SD. *Autentik: Jurnal Pengembangan Pendidikan Dasar*, *1*(1), 52–64. https://autentik.stkippgrisumenep.ac.id/index.php/autentik/article/view/6/6

Asmaranti, W., Pratama, G. S., & Wisniarti, W. (2018). *Desain Lembar Kerja Peserta Didik (LKPD) Matematika dengan Pendekatan Saintifik Berbasis Pendidikan Karakter. https://jurnal.ustjogja.ac.id/index.php/etnomatnesia/article/view/2395*

Badriyah, L. (2021). Pengembangan Model Online Learning. *Jurnal Penelitian*, *1*, 1–124. https://digilib.uinsa.ac.id/50131/

Branch, R. M. (2009). *Instructional design: The ADDIE approach (Vol. 722)*. Springer Science & Business Media. https://link.springer.com/book/10.1007/978-0-387-09506-6

Sukma,E ,Mahjuddin, R dan Amini,R (2017). Literacy Media Development in Improving Reading and Writing Skill of Early Class Students in Elementary School Padang Utara Padang. *In 9th International Conference for Science Educators and Teachers (ICSET 2017)*, 145–150. https://jurnal.ustjogja.ac.id/index.php/etnomatnesia/article/view/2395

Lestari,H., Ali,M., Sopandi,W., Ana R., dan Wulan, I. R. (2022). The Impact of the RADEC Learning Model Oriented ESD on Students' Sustainability Consciousness in Elementary School. *Pegem Journal of Education and Instruction*, *12*(2), 113–122. https://doi.org/10.47750/pegegog.12.02.11

Ismail, R., Rifma, R., & Fitria, Y. (2021). Pengembangan Bahan Ajar Tematik Berbasis Model PJBL di Sekolah Dasar. *Jurnal Basicedu*, *5*(2), 958–996. https://doi.org/10.31004/basicedu.v5i2.808

Abu Musa,MA dan Al Momani,JA. (2022). University Students' Attitudes towards Using the Nearpod Application in Distance Learning. *Journal of Education and E-Learning Research*, *9*(2), 110–118. https://doi.org/10.20448/jeelr.v9i2.4030

Purnama, A & Suparman. (2020). E-LKPD Berbasis PBL untuk Meningkatkan Kemampuan Liter, asi Matematis Peserta Didik. *Jurnal Kajian Pendidikan Matematika*, *6*(1). https://doi.org/ 10.36681/tused.2022.117

Amini, R., & Saniyah, S. (2021). Pengembangan Modul Pembelajaran IPA Berbasis Picture And Picture di Sekolah Dasar. *Jurnal Basicedu*, *5*(2), 835–884. https://doi.org/10.31004/basicedu.v5i2.769

Anida, D. E. (2021). Pengembangan Model Pembelajaran Saintifik Berbasis Kearifan Lokal untuk Perkembangan Kognitif Anak Usia 5-6 Tahun. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *5*(2), 1557–1565. https://doi.org/ 10.31004/obsesi.v5i2.898

Armadi, A. (2017). Pendekatan scientific dalam pembelajaran tematik terpadu di SD. *Autentik: Jurnal Pengembangan Pendidikan Dasar*, *1*(1), 52–64. https://autentik.stkippgrisumenep.ac.id/index.php/autentik/article/view/6/6

Asmaranti, W., Pratama, G. S., & Wisniarti, W. (2018). *Desain Lembar Kerja Peserta Didik (LKPD) Matematika dengan Pendekatan Saintifik Berbasis Pendidikan Karakter. https://jurnal.ustjogja.ac.id/index.php/etnomatnesia/article/view/2395*

Badriyah, L. (2021). Pengembangan Model Online Learning. *Jurnal Penelitian*, *1*, 1–124. https://digilib.uinsa.ac.id/50131/

Branch, R. M. (2009). *Instructional design: The ADDIE approach (Vol. 722)*. Springer Science & Business Media. https://link.springer.com/book/10.1007/978-0-387-09506-6

Sukma,E., Mahjuddin,r., dan Amini,R (2017). Literacy Media Development in Improving Reading and Writing Skill of Early Class Students in Elementary School Padang Utara Padang. *In 9th International Conference for Science Educators and Teachers (ICSET 2017)*, 145–150. https://jurnal.ustjogja.ac.id/index.php/etnomatnesia/article/view/2395

Lestari,H., Ali,M., Sopandi,E., Ana R., dan Wulan, I. R. (2022). The Impact of the RADEC Learning Model Oriented ESD on Students' Sustainability Consciousness in Elementary School. *Pegem Journal of Education and Instruction*, *12*(2), 113–122. https://doi.org/10.47750/pegegog.12.02.11

Ismail, R., Rifma, R., & Fitria, Y. (2021). Pengembangan Bahan Ajar Tematik Berbasis Model PJBL di Sekolah Dasar. *Jurnal Basicedu*, *5*(2), 958–996. https://doi.org/10.31004/basicedu.v5i2.808

Abu Musa,MA dan Al Momani, JA. (2022). University Students' Attitudes towards Using the Nearpod Application in Distance Learning. *Journal of Education and E-Learning Research*, *9*(2), 110–118. https://doi.org/10.20448/jeelr.v9i2.4030

Imran,ME., Sopandi,W., dan Bachruddin Mustafa, C. R. (2021). Improving primary school teachers' competence in teaching multi- literacy through RADEC-based training programs. *Cypriot Journal of Educational Sciences*, *16*(6), 3033–3047. https://doi.org/10.18844/cjes.v16i6.6494

Abdullah, MI dan Karyawati, N. (2022). Nearpod use as a learning platform to improve student learning motivation in an elementary school. *Journal of Education and Learning (EduLearn)*, *16*(1), 121–129. https://doi.org/10.11591/edulearn.v16i1.20421

Nufus, H., Khadun, I., & Nazar, M. (2018). Pengembangan Lembar kerja peserta didik (LKPD) INTERAKTIF BERBASIS SOFTWARE ISPRING PADA MATERI LARUTAN PENYANGGA. *Prosiding Seminar Nasional MIPA*, 46– 53. https://www.semanticscholar.org/paper/PENGEMBANGAN-LEMBAR-KERJA-PESERTA-DIDIK-(LKPD)-PADA-Nufus/966452b844c556ba89947917ddd02e37ab2ebf21

Pratama, Y. A., Sopandi, W., & Hidayah, Y. (2019). Model Pembelajaran Radec (Read-Answer-Discuss-Explain And Create): Pentingnya Membangun Keterampilan Berpikir Kritis Dalam Konteks Keindonesiaan. *Indonesian Journal of Learning Education and Counseling*, *2*(1), 1–8. https://doi.org/10.33541/edumatsains.v7i2.4045

Pratiwi, N., & Mustadi, A. (2021). Hots-Based Learning in 2013 Curriculum: Is it Suitable? *JPI (Jurnal Pendidikan Indonesia)*, *10*(1), 128–135. https://doi.org/10.23887/jpi-undiksha.v10i1.22781

Tulljanah, R dan Amini,R. (2021). Model Pembelajaran RADEC sebagai Alternatif dalam Meningkatkan Higher Order Thinking Skill pada Pembelajaran IPA di Sekolah Dasar: Systematic Review. *Jurnal Basicedu*, *5*(6), 5508–5519. https://doi.org/10.31004/basicedu.v5i6.1680

Julian,R & Suparman. (2019). Analisis Kebutuhan E-LKPD Untuk Menstimulasi Kemampuan Berpikir Kritis dalam Memecahkan Masalah. *PROCEEDINGS OF THE 1st STEEEM 2019*, *1*(1), 238-243. http://seminar.uad.ac.id/index.php/STEEEM/article/view/2802/821

Andria Syafitri,R dan Tressyalina. (2020). The Importance of the Student Worksheets of Electronic (E-LKPD) Contextual Teaching and Learning (CTL) in Learning to Write Description Text during Pandemic COVID-19. *Proceedings of the 3rd International Conference on Language, Literature, and Education (ICLLE 2020)*. https://doi.org/10.2991/assehr.k.201109.048

Sarginson dan McPherson. (2021). Nearpod: An Innovative Teaching Strategi to Engage Students ini Pathophysiology/Pharmacology. *Journal of Nursing Education*, *60*. https://doi.org/10.3928/01484834-20210616-13

Sasmito, A. P., & Sekarsari, P. (2022). Enhancing Students' Understanding and Motivation During Covid-19 Pandemic via Development of Virtual Laboratory. *Journal of Turkish Science Education*, *19*(1), 180–193. https://doi.org/10.36681/tused.2022.117

Simbolon, N. (2014). Faktor-faktor yang mempengaruhi minat belajar peserta didik. *Elementary School Journal Pgsd Fip Unimed*, *1*(2). https://jurnal.unimed.ac.id/2012/index.php/elementary/article/view/1323/1084

Yuliana Nasrullah,Zarina Akbar, A. S. (2021). Pengembangan Media Komik untuk Meningkatkan Pemahaman Kesiapsiagaan Bencana Banjir pada Anak. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, *6*(2), 832–843.

DOI: 10.31004/obsesi.vxix.xxx

https://doi.org/10.31004/obsesi.v6i2.1540

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