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DEVELOPMENT OF CONTEXTUAL ELKPD ASSISTED LIVEWORKSHEET ACCOMPANIED BY INTERACTIVE VIDEO IN CLASS VIII

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ABSTRACT
Students still have difficulty understanding the Pythagorean Theorem because the teaching materials are not interesting, have not provided concrete examples, and have not made optimal use of digital media. This is evidenced by the daily test scores of students where a total of 71% of students got a score below the set KKTP of 75. This study aims to produce a contextual E-LKPD assisted *by a Liveworksheet* accompanied by a valid and practical interactive video for grade VIII students. E-LKPD was designed using *Canva*, features interactive videos from YouTube, and is converted to an interactive format with *Liveworksheet* for easy access and online work. This study uses *the ADDIE* (*Analysis, Design, Development, Implementation, Evaluation) model* with 10 students in class VIII B MTs N 1 East Lampung. The instruments used include validation sheets of material experts, media experts and student practicality questionnaires. The validation results showed a validity score of 84.75% from material experts and 87.66% from media experts, with an average of 86.2% in the very valid category. Meanwhile, the practicality results of the students were 90% with the category of very practical. Thus, this Canva and Liveworksheet-based contextual E-LKPD *is* declared to be very valid and very practical. This media is suitable for use as an alternative teaching material that supports interesting, flexible, and in accordance with the Independent Curriculum.
Keywords: ADDIE; contextual; E-LKPD; liveworksheet; interactive video

ABSTRAK
Peserta didik masih mengalami kesulitan memahami Teorema Pythagoras karena bahan ajar kurang menarik, belum memberikan contoh konkret, dan belum memanfaatkan media digital secara optimal. Hal ini dibuktikan dengan nilai ulangan harian peserta didik yang dimana sejumlah 71% peserta didik mendapat nilai dibawah KKTP yang ditetapkan yaitu sebesar 75. Penelitian ini bertujuan untuk menghasilkan E-LKPD kontekstual berbantu Liveworksheet disertai video interaktif yang valid dan praktis untuk peserta didik kelas VIII. E-LKPD dirancang menggunakan Canva, dilengkapi video interaktif dari YouTube, dan diubah ke format interaktif dengan Liveworksheet agar mudah diakses dan dikerjakan secara daring. Penelitian ini menggunakan model ADDIE (Analysis, Design, Development, Implementation, Evaluation) dengan subjek 10 peserta didik kelas VIII B MTs N 1 Lampung Timur. Instrumen yang digunakan meliputi lembar validasi ahli materi, ahli media dan angket kepraktisan peserta didik. Hasil validasi menunjukkan skor kevalidan 84,75% dari ahli materi dan 87,66% dari ahli media, dengan rata-rata 86,2% dengan kategori sangat valid. Sedangkan Hasil kepraktisan dari peserta didik sebesar 90% dengan kategori sangat praktis. Dengan demikian, E-LKPD kontekstual berbasis Canva dan Liveworksheet ini dinyatakan sangat valid dan sangat praktis. Media ini layak digunakan sebagai bahan ajar alternatif yang mendukung pembelajaran matematika yang menarik, fleksibel, dan sesuai dengan Kurikulum Merdeka.
Kata kunci*:* ADDIE*; E-LKPD; kontekstual;* liveworksheet; *video interaktif*

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Introduction

Learning is a process of interaction between students, educators, learning resources, and the learning environment that continues to evolve along with technological advances (Putri, 2023). The use of technology in the world of education is an unavoidable need because it can support the creation of a more efficient and interactive learning process (Dewi 2024). This is in line with Permendikbud No. 22 of 2016 concerning Standards for the Process of Primary and Secondary Education, which emphasizes that one of the principles of learning is the use of information and communication technology (ICT) to improve the quality of learning. Therefore, educators are required to be able to integrate ICT in teaching and learning activities so that students' learning experiences become more meaningful and relevant to the demands of the times.

In line with the education policy, MTs N 1 East Lampung has implemented an Independent Curriculum that emphasizes flexibility, project-based learning, and provides a wider space for teachers and students to innovate. The Independent Curriculum aims to increase students' active participation in learning while emphasizing the importance of developing creativity (Ministry of Education and Culture, 2022). However, the results of observations show that the achievement of mathematics learning outcomes of grade VIII students is still low. Daily test score data on the Pythagorean Theorem material shows that 71% of students obtained scores below the Learning Goal Achievement Criteria (KKTP) set, which is 75. This condition indicates that there are difficulties for students in understanding basic concepts and the application of the Pythagorean Theorem in contextual problems.

One of the factors causing the low learning outcomes of peseta didik is the use of teaching materials which are still limited to printed Student Worksheets (LKS). The worksheet tends to be monotonous, lacks visual illustrations, and is not able to relate mathematical concepts to real life. As a result, learners have difficulty relating abstract concepts to everyday contexts. In fact, according to Palupi et al. (2020), varied and interactive learning media is able to increase students' understanding of complex materials. In this context, the development of E-LKPD (Electronic Worksheets for Students) is one of the alternative solutions because it is able to integrate text, images, animations, videos, and interactive features that are more attractive and easily accessible through digital devices. This opinion is supported by Farkhati & Sumarti (2019) who explain that E-LKPD is a digital-based worksheet that contains instructions for learning activities,

Furthermore, the application of a contextual approach in the development of E-LKPD is believed to be able to provide a more meaningful learning experience for students. Lestisia et al. (2023) emphasized that the contextual approach emphasizes the full involvement of students in relating learning materials to real-life situations, so as to encourage a deeper understanding of concepts. In line with that, the use of the *Liveworksheet platform* also supports the preparation of interactive LKPDs that can be accessed online and provides direct feedback to

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students (Sudarman et al., 2022). Furthermore, Fauzi et al. (2021) states that *Liveworksheet* allows worksheets to be presented in an interactive form and easily accessible online. In addition to providing interactive features, the integration of interactive videos into E-LKPD is also believed to play an important role in improving the quality of learning. Gunawan (2020) revealed that the use of interactive videos can help students receive the material better because the presentation is more contextual. This is strengthened by the opinion of Firmansah & Firdaus (2021) who explain that interactive videos combine elements of sound, movement, images, and text so that they are able to clarify the delivery of material and facilitate students' understanding more optimally.

Several previous studies have shown that the development of Liveworksheet-assisted contextual-based E-LKPD has a positive impact on learning. Vonna et al. (2022) stated that contextual E-LKPD with *Liveworksheet* is able to attract interest in learning when student motivation decreases. The same thing was expressed by Anjany (2024) who found that *Liveworksheet* is effectively used in the development of contextual E-LKPD. Meanwhile, Shalahuddin & Hayuhantika (2022) affirmed that E-LKPD with Liveworksheet can improve conceptual understanding, and Tiwi et al. (2023) added that contextual-based LKPD is able to train students' problem-solving skills. Based on these findings, this study developed a contextual E-LKPD assisted *by Liveworksheet* with interactive video integration**.** This innovation is seen as relevant to answer the needs of mathematics learning, especially in the material of the Pythagorean Theorem**.** This research aims to produce a contextual E-LKPD based on Canva and Liveworksheet accompanied by interactive videos that are valid, practical, and support the implementation of the Independent Curriculum.

Research Methods

This research is research and development using the ADDIE *(*Analysis, Design, Development, Implementation, Evaluation*) model* as stated by Branch (2009). The selection of this model is based on its systematic, structured, and flexible characteristics, allowing for evaluation and revision at each stage of development. Thus, the resulting products are not only tested for feasibility, but can also be implemented practically in the field. *The ADDIE model* is considered relevant for developing teaching material media in the form of contextual E-LKPD assisted *by liveworksheets* accompanied by interactive videos**,** because the development process requires continuous planning, design, validation, implementation, and evaluation stages.

Research Stages

The analysis stage began with the implementation of a pre-survey of teachers and students at MTs N 1 East Lampung. The results of the pre-survey show that the teaching materials used in the learning process are still conventional, namely in the form of LKS books that have not integrated contextual approaches and the use of interactive digital media. This condition has implications for the low achievement of student learning outcomes, which is shown by daily test data that as many as 71% of students obtain scores below the Achievement Target Completeness Criteria (KKTP). In addition, students also

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experience difficulties in understanding concepts, especially in the material of the Pythagorean Theorem. At the design stage, E-LKPD was developed by integrating contextual learning principles that emphasize the relationship between the material and the real experiences of students. To reinforce the visual aspect, the initial design of E-LKPD was created using Canva with an attractive and communicative look. Furthermore, the design is integrated into *Liveworksheet* as an interactive *platform* that allows for automatic presentation of exercises, simulations, and feedback. In addition, this E-LKPD is also equipped with interactive videos that function to provide explanations of material and examples of applications in daily life, so that students can learn in a more deep, varied, and meaningful way. The development stage involves validation by four experts, two subject matter experts and two media experts. The researchers adjusted their input results to the initial product. The implementation was carried out through a trial limited to 10 students in two sessions. Each student is asked to work on the E-LKPD through a mobile phone device and fill out a practicality questionnaire as feedback on the products developed. The evaluation stage where this stage is not only carried out at the end but is carried out at all stages.

Subject and location of the research

The subjects in this study are students of class VIII B. For a limited trial using 10 students. The sample was taken randomly (random sampling) from a total of 31 students in the class, taking into account proportional representation to take part in the product trial. This research was carried out at MTs N 1 East Lampung.

Research Instruments

The instruments used in this study were interview sheets and questionnaires. The questionnaires used in the study were a validation questionnaire for material experts and media experts, as well as a product practicality questionnaire.

1. Interview sheet
   Interview sheets are used to find out the problems experienced by students and what students need.
2. Questionnaire

The questionnaires used are a validation questionnaire for material experts and media experts as well as a product practicality questionnaire.

1. The aspects that are assessed in the material validation are the quality aspects of the content of the objectives and the quality of learning.
2. The aspects assessed in media validation are aspects of integration, balance, letterform, color and language.
3. The aspects that are assessed on the practicality of the product are the quality aspects of the content of the objectives, the quality of the technique and the quality of learning.

Data analysis techniques

The data analyzed is in the form of qualitative data obtained from the comments and suggestions of experts and respondents as well as quantitative data

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from the calculation of valid and practical scales from the E-LKPD teaching materials media produced. To find out the validity of a product, the results of the percentage calculation of 2 subject matter experts and 2 media experts are seen, while the practicality of a product is seen from the results of the calculation of the percentage of respondents. The percentage on the validation and practicality questionnaire is sought with the following formula (1):

$$N = \frac{Number\ of\ scores\ awarded\ by\ validators}{Maximum\ score\ amount}\ x\ 100\% \qquad (1)$$

The product validity criteria are presented in Table 1.

Table 1. Product validity criteria

Criteria	Percentage
Highly Valid	$80 < N \leq 100$
Valid	$80 < N \leq 100$
Less Valid	$40 < N \leq 60$
Invalid	$20 < N \leq 40$
Highly Invalid	$0 < N \leq 20$

Based on the validity criteria from Table 1, if it is more than > 60%, the product meets the valid criteria and can be tested to students to see the practicality of the product. The criteria for practicality in the product are presented in Table 2.

Table 2. Product Practicality Criteria

Criteria	Percentage
Very Practical	$80 < N \leq 100$
Practical	$80 < N \leq 100$
Less Practical	$40 < N \leq 60$
Impractical	$20 < N \leq 40$
Very Impractical	$0 < N \leq 20$

Based on the product Practicality criteria from Table 2, if it is more than > 60%, the product meets the practical criteria.

Results and Discussion

Based on the stages of *the ADDIE development model*, which includes the analysis, design, development, implementation, and evaluation stages. According to Alfah (2020), the ADDIE *Model* is one of the learning and research processes that is interactive with several basic learning stages that are very effective, dynamic and very efficient. This is in line with Agustina and Vahlia (2016) who stated that one of the characteristics of the products developed is that they can be applied well and are beneficial to users. Good and well-developed product results increase the motivation and desire of students to gain more in-depth knowledge about the material presented. A simple and straightforward model is *the ADDIE*

model for each stage is explained in detail, equipped with quantitative and qualitative data, student responses, and discussions based on theory and previous research results as well as the quality of E-LKPD.

The stages in *the ADDIE development model* are analysis, design, development, implementation and evaluation. The analysis stage in this study aims to identify the needs of teachers and students for learning media and evaluate the initial conditions of the learning process in the classroom. The analysis activity was carried out through interviews with mathematics subject teachers and the distribution of questionnaires to students of grade VIII MTs N 1 East Lampung. Based on the results of the interview, information was obtained that mathematics learning at the school has not run optimally because it still relies on the use of monotonous printed worksheets, minimal visual media support, and has not been associated with the real-life context of students. This condition has an impact on the understanding of mathematical concepts that is less deep. In fact, in accordance with the mandate of Permendikbud No. 22 of 2016**,** the learning process should utilize information and communication technology to increase the efficiency and effectiveness of learning.

In today's digital era, teachers are required to be able to present technology-based learning media that is not only interesting, but also flexible. This is reinforced by the findings of Hidayat et al. (2020) which states that digital-based devices can be an alternative learning media because they allow students to access materials anytime and anywhere. In line with these needs, the development of E-LKPD is seen as an innovative solution because it is relevant to technological developments while being able to support the learning needs of students in a practical and interactive manner. According to Rahayu et al. (2021), an attractive electronic LKPD must be designed by paying attention to the characteristics of students and school conditions. Furthermore, Palupi et al. (2020) emphasized that digital learning media equipped with text, images, videos, and interactive features can increase students' motivation and involvement in the learning process. This opinion is strengthened by Sari & Agustini (2020) who added that E-LKPD can be presented interactively because it contains texts, illustrations, and learning videos. To strengthen the understanding of the concept, the E-LKPD developed in this study was prepared by applying a contextual approach that emphasizes the relationship between material and daily life. This approach is judged to be precise as explained by Lestisia et al. (2023) that a contextual approach is able to make learning more meaningful, and is supported by the results of research by Sugandi & Bernard (2018) which shows that a contextual approach can increase students' motivation to learn.

At the design stage, the initial design of E-LKPD was carried out by integrating a contextual approach enriched with interactive videos and assisted by *the Liveworksheet platform.* This design emphasizes the principle of a contextual approach that serves to connect learning materials with students' real-life situations. The contextual approach is believed to be able to encourage active involvement in the learning process because it includes seven main components, namely constructivism, inquiry, inquiry, learning community, modeling, reflection, and authentic assessment (Soleha et al., (2021); Kurniasih, (2021). The components developed in the E-LKPD design include the preparation of the

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content structure, the application of the seven components of the contextual approach, and the visual design arrangement using Canva**,** so that the learning flow is systematically arranged from the introduction, the core activities, to the evaluation. To enrich the learning activities, an interactive video from *YouTube* was inserted at the inquiry stage with the aim of stimulating students to observe real phenomena related to the material of the Pythagorean Theorem**,** as well as encouraging the process of reflection and exploration of concepts.

According to Fakhriyana & Riayah (2021), **the** use of interactive videos in mathematics learning can increase learning motivation as well as clarify the presentation of the material. This is strengthened by the findings of Firmansah & Firdaus (2021) who explain that interactive videos are able to stimulate the development of the cognitive, affective, and psychomotor realms of students through more varied learning experiences. The selection of the Canva application and *the Liveworksheet platform* is based on the availability of features that make it easier for teachers to design visual displays while providing question interactivity. Tanjung & Faiza (2019) emphasized that Canva provides a variety of creative designs that can increase teachers' motivation and creativity in creating learning media. Thus, the E-LKPD design produced at the design stage not only displays visually appealing content, but also integrates contextual components, digital technology, and interactive videos to foster curiosity, strengthen student involvement, and support an independent, flexible, and appropriate learning process in accordance with the characteristics of the digital generation.

The development stage involves the initial product manufacturing process and validation by experts. Instrument validity is a measurement tool to measure data (Amanda et al., 2019). Validation was carried out by four validators consisting of two material experts and two learning media experts. In the table below, you can see the results of the material validation analysis in Table 3.

Table 3. Material Validation Results

Aspects	**Presentation**		**Average Percentage Per Aspect**
	VA1	***VA2***	
The Qualities of Isis and Its Purpose	92%	82%	87%
Learning Quality	85%	80%	82,5%
Average	88,5%	81%	84,75%
Remarks			**Highly Valid**

In accordance with Table 3, the results of the validation of subject matter experts *(VA) were* identified two aspects, namely: the quality aspects of content and objectives obtained an average of 87% with a very valid category, where *VA1* gave a score of 92% and *VA2* of 82%. This shows that the E-LKPD has been in accordance with the learning outcomes, although improvements are still needed in mathematical symbols, image adjustments, and the addition of contextual approach stages. In terms of learning quality, an average of 82.5% was obtained with a very valid category. The validator assessed that the learning structure and flow of the material were adequate, but suggested improvements to the

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introductory material, visualization of the questions, and the provision of more contextual examples to be relevant to the learner's experience. Overall, the average total validation of 84.75% is in the very valid category, so that E-LKPD is suitable for use with several revisions and improvements, especially on visual aspects, learning objectives, and the application of context in the questions, before being tested on students in small groups. In line with the research of Shalahuddin & Hayuhantika (2022), the results of the media expert test showed that the contextual-based E-LKPD design with *liveworksheet media* obtained a score of 90% in the very valid criteria. In addition, material experts assessed that this E-LKPD was equipped with illustrations that supported the understanding of concepts and questions that were contextual and in accordance with the characteristics of students. The subject matter expert also suggested adding instructions for use and strengthening the link between the video and the content of the material, which was then accommodated at the product revision stage. This is one of the advantages of this study, namely that E-LKPD is designed not only to be valid in terms of content, but also adaptive to input for improvement. The results of the media validation are presented in Table 4.

Table 4. Media validation results

Media Validation Results			
Aspects	**Presentation**		**Average Percentage Per Aspect**
	VS1	***VT2***	
Integration	80%	93,33%	85,66%
Balance	90%	90%	90%
Letter Shape	75%	95%	85%
Color	80%	93,33%	86,66%
Language	80%	100%	90%
Average	81%	94,33%	87,66%
Remarks			**Highly Valid**

Based on Table 4, the results of the validation of media experts *(VE)* obtained an average percentage of 87.66% with a very valid category**,** which shows that E-LKPD has met the display quality criteria in the aspects of integration, balance, letterform, color, and language. In the aspect of integration, it obtained a score of 85.66%, *VE1* emphasized the need for visual alignment with content, while *VE2* assessed it as very good. The balance aspect obtained a score of 90%, indicating that the graphic arrangement is proportional even though it is still recommended to improve the writing distance. The aspect of the shape of the letter obtained a score of 85% requires consistency of size and spacing between letters so that readability is more optimal, while the color aspect obtained a score of 86.66% indicating the need to adjust the illustration to be more relevant to the context of the question. In the language aspect, a score of 90% was obtained, the use of instruction was assessed according to the characteristics of the students, with additional suggestions in the form of improving the identity of the compiler and concept map. The findings of this study indicate that Liveworksheet-assisted *contextual E-LKPD* has an attractive visual appearance, a consistent layout, and

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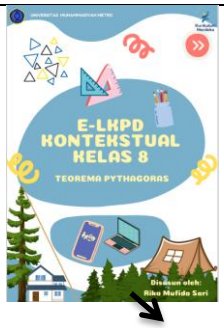
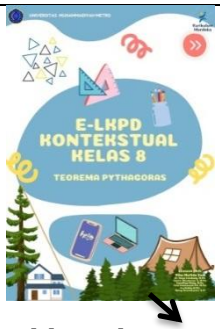
easy navigation to be accessible both through computers and smartphones. Additionally, interactive features such as video links, practice questions, and auto-responses have been shown to support learner engagement in learning. This result is in line with Shalahuddin & Hayuhantika (2022) obtained a score of 80.47% which shows that the contextual-based E-LKPD design with *liveworksheet media* obtained a high validity value and was considered suitable for use. Thus, the main advantage of this product lies in the integration of contextual approaches with interactive digital technology, which supports independent, flexible, and appropriate learning in accordance with the needs of today's students.

After the product design is validated through the assessment of material experts and media experts. The researcher made improvements to the product design that had been made according to the comments that had been given by material experts and media experts. The following revision results of the four validators are presented in Table 5.

Table 5. Revision by validator

No.	Before Revision	After Revision
1.	 Add the names of supervisors and validators in the compiler list on the cover	 After adding the names of supervisors and validators to the list of drafters on the cover
2.	 After the E-LKPD instructions page, add an explanation of the stages of the contextual approach	 After adding an explanation of the stages of the contextual approach

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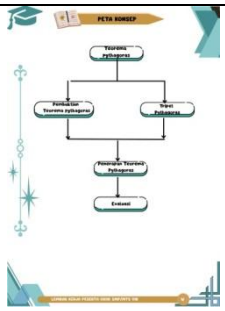
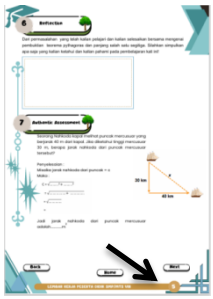
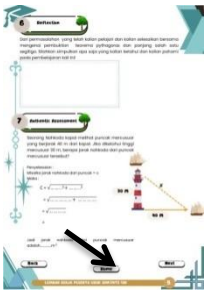
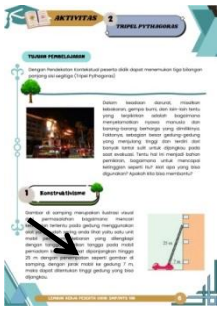
3		
	After the E-LKPD user reference page, add a concept map	After adding a concept map
4		
	Customize the image to the question	After adjusting the picture to the question
5		
	Adjust the writing spacing and right and left alignment	After adjusting the write spacing and right and left alignment

Based on Table 5, it is the revision stage of validator input, presented before and after the revision. The implementation stage was carried out after the product was validated and revised, the product was tested in a small group consisting of 10 students of class VIII B at MTs N 1 East Lampung. The trial was carried out for two meetings, each meeting was used to work on the E-LKPD. Students access E-LKPD through the *Liveworksheet* link or QR Code that is shared with them. After completing the E-LKPD given, they were asked to fill out a practicality questionnaire.

The questionnaire includes indicators of the quality of content and objectives, quality of technique, and quality of learning. The results of the practicality questionnaire analysis are presented in Table 6 as follows:

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Table 6. Practicality test results

Product Practicality Test Results	
Aspects	**Average percentage of each aspect**
Content Quality and Purpose	86%
Quality Engineering	93%
Learning Quality	91%
Average	90%
Remarks	**Very Practical**

Based on Table 6, it can be seen that the average practicality score of all indicators is 90%, which falls into the category of very practical. The following is one of the suggestions and comments given by students after working on the E-LKPD given in Figure 1.

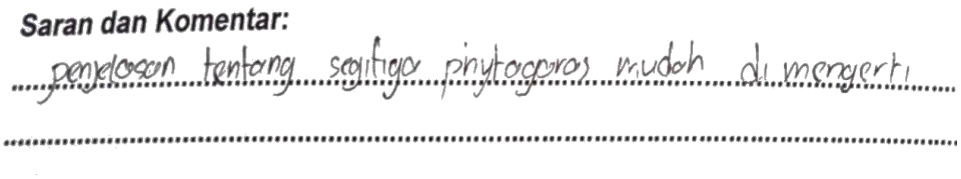

Figure 1. Student suggestions and comments

Figure 1. show responses and comments from students after using E-LKPD. This feedback is used to evaluate the practicality and attractiveness of the E-LKPD developed, as well as show how far E-LKPD helps students' learning comprehension process.

Based on these results, the E-LKPD product was declared suitable for use in learning because it meets the requirements for the validity of the content, practicality of use, and good quality of E-LKPD. This is in line with research by Wirawan et al. (2022) which states that learning media developed with *the ADDIE* approach and tested for validity and practicality will be more easily accepted by students. This study has a positive impact on the development of E-LKPD instruments with a contextual approach that integrates *liveworksheet* accompanied by interactive videos in class VIII The results of this study are in line with the findings of Rahmayani & Indriyani (2024) who stated that the use of E-LKPD assisted *by Liveworksheet* able to increase students' understanding and active involvement in learning, when compared to printed LKPDs which tend to be monotonous and less supportive of active learning. The implementation of Liveworksheet-assisted *contextual E-LKPD* accompanied by interactive videos also provides easy access for students to assessments relevant to daily life, while increasing their interest and participation in the learning process. In addition, the development of teaching materials that are tailored to the characteristics of students has been proven to help teachers in providing evaluation instruments that are more targeted, flexible, and adaptive to learning needs in the digital era.

When compared to previous research, this study has an element of novelty in the integration between contextual approaches, Liveworksheet platforms, and interactive videos in one learning product. Most previous research tends to develop only one aspect. For example, Tiwi et al. (2023) put more emphasis on the development of contextual-based E-LKPD to improve problem-solving capabilities,

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while Sudarman et al. (2022) focused on the development of Liveworksheet-assisted e-modules without the in-depth integration of contextual approaches. Thus, this research makes a new contribution through multi-component integration that supports each other in improving the quality of learning.

From a theoretical perspective, the results of this study also strengthen the concept of contextual learning that emphasizes the relationship between material and real life. This is in accordance with the findings of Sugandi and Bernard (2018) who stated that the contextual approach is able to improve students' mathematical understanding and communication. In this study, a contextual approach is implemented through the presentation of problems that are relevant to daily life, so that students can understand the concept of the Pythagorean Theorem in a more meaningful way. In addition, the results of this study are also relevant to the concept of digital technology-based learning that emphasizes flexibility and independence of learning. Hidayat et al. (2020) stated that technology-based online learning can increase students' learning independence. This can be seen in this study, where students can access E-LKPD anytime and anywhere through digital devices.

Overall, the relationship of the results of this study with previous research shows that the development of contextually-assisted Liveworksheet-assisted E-LKPD and interactive videos is a relevant and effective innovation in mathematics learning. This research not only corroborates previous findings, but also makes new contributions through the integration of various learning components in one comprehensive medium. The development of contextual E-LKPD assisted *by Liveworksheet* accompanied by interactive videos using *the ADDIE* model is considered appropriate, because this model has systematic and evaluative stages so that the resulting product is more valid, practical, and in accordance with learning needs.

Conclusions and Suggestions

This research produced a contextual E-LKPD assisted by a Liveworksheet accompanied by an interactive video on the Pythagorean Theorem material for class VIII which was developed using *the ADDIE* (*Analysis, Design, Development, Implementation, and Evaluation) model.* Based on the validation results of material experts and media experts, the developed products obtained scores of 84.75% and 87.66%, respectively, with an average score of 86.2 in the very valid category**.** This shows that E-LKPD has met the aspects of content quality, objectives, learning, and media, so that it is suitable for use as teaching material. The practicality test in small groups also obtained an average score of 90% with the category of very practical**,** which confirms that E-LKPD is easy to use, visually appealing, and able to support students' understanding of concepts.

The findings of this study confirm that the integration of contextual approaches with interactive digital media can increase student engagement, facilitate independent learning, and make the material more meaningful because it is associated with real experiences. However, there are still several aspects that need to be improved, such as the presentation of mathematical symbols, the relevance of illustrations, and the presentation of more contextualized problem examples. Thus, the E-LKPD developed is declared valid, practical, and has the

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potential to be implemented more widely in mathematics learning at the junior high school/MTs level by considering the readiness of digital infrastructure.

Based on the findings of this study, it is suggested that teachers can use Liveworksheet-assisted contextual E-LKPD regularly in learning activities as an alternative to practice questions that are more varied and interesting. Students are expected to use this media as a means of independent practice that is fun and relevant to real experiences, so that it can increase motivation and understanding of concepts. Schools can consider the application of this E-LKPD more widely in various subjects and across departments to support the digital transformation of learning. As for the next researcher**,** the development of similar media can be carried out with a wider scope of material and an evaluation of the effectiveness of student learning outcomes on a larger scale in order to obtain a comprehensive picture of the contribution of media to improving the quality of learning.

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