

Development of Student Worksheets (E-LKPD) Oriented to the Case Method with DocFly Assistance in the Pancasila Education Subject for Class XI at SMA Srijaya Negara Palembang

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Abstract: This research aims to produce E-LKPD oriented towards the case method with the help of Docfly, which has the potential effect on students' critical thinking skills. In this study, the research subjects are the 11th-grade students at SMA Srijaya Negara Palembang. The research method used is Research and Development (R&D) with the ADDIE model. The data collection techniques used in this study are interviews, observations, and questionnaires. The data analysis technique used is descriptive statistical techniques. The validation results by subject matter experts were 91%, by language experts 98%, and by media experts 91%, all categorized as very feasible. The results of the practicality test were conducted through a one-to-one evaluation tested on three students with a percentage of 80%, categorized as practical, and a small group evaluation tested on six students with a percentage of 86%, categorized as very practical. The results from the field test stage, which was tested on a full class of students, obtained a percentage of 81%, categorized as high. Based on these results, it can be concluded that the E-LKPD developed by the researcher is valid, practical, and has a potential effect on students' critical thinking skills.

Keywords: E-LKPD, Case Method, DocFly, Student, Pancasila Education.

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A. INTRODUCTION

Learners' internal factors such as self-motivation to learn, resilience, competitive nature, and external factors such as the learning environment at school and at home, educators' teaching practices, and the availability of learning facilities affect learners' abilities. From external issues, educators have a very important role. Educators in teaching must use different methods. To increase learners' participation, creativity, innovation and critical thinking skills, educators must use effective learning strategies (Hasanah et al, 2023). Therefore, one of the external problems is the teaching practices of educators. According to Widiastuti, to answer these problems, educators can use case method or problem-based to improve students' critical thinking skills. Case method is a learning method that gives learners the opportunity to see their potential, self-actualize, innovate, and find new ways to learn case method that makes learners concentrate on superior performance rather than potential (Widiastuti et al, 2022).

The case approach is an effective way to teach. This method involves conducting case studies on problems related to the learning process. These problems can come from the outside environment or from the surrounding environment. With the problem presented in the case study, it provides an opportunity for learners to act as decision-makers on the problem

presented. This allows learners to not only learn or understand the problem, but also learn how to solve the problem through a problem-based learning approach (Widiastuti et al, 2022). In the context of learning that uses case method or problem-based, teaching materials that are also based on case method are needed, one of which is in the form of LKPD. (Dwi Lestari, Dyah et al, 2021). states that LKPD aims to increase and deepen students' knowledge of the material provided. Judging from the LKPD component which is designed to provide motivation or attraction through problems related to learning activities. LKPD aims to improve critical thinking skills and to achieve this can be through existing subjects at school, one of which is the subject of Pancasila Education which in the learning process can apply the case method, because this subject requires students to think critically and there are many cases in the realm of Pancasila education. However, most LKPDs currently do not use case method-oriented learning and in the learning process at school LKPDs are usually in printed form, namely sheets of paper containing task material that students must do (Ariyansah, et al 2021).

The Learner Worksheet (LKPD) is one of the teaching materials that began to be developed in the form of electronic LKPD. E-LKPD contains material and practice questions that are more specific because they can function as interactive multimedia that can be used through computers and even smartphones with the help of various platforms, one of which is docfly which can be used offline through electronic devices and is flexible in its use which makes it an alternative to help teachers and students in the learning process (Septiani and Amir et al, 2023). With the help of docfly on E-LKPD in this study, it is based on its attractive appearance and makes it easy for teachers to edit by inserting images, video links, and other menus. It also allows students to answer the E-LKPD offline and provides greater flexibility and accessibility. The use of E-LKPD also helps reduce paper waste in an effort to preserve the environment (Suryaningrum and Fiana et al, 2024). With the use of docfly being one way of presenting case videos, it supports the development of students in critical thinking and one of the subjects that requires students to think critically is Pancasila education. As we see that there are many cases that are in the realm of Pancasila education

The results of previous research conducted by (Siregar, Ade Wahyuni et al, 2023) concluded that the case method-based E-LKPD product developed showed an increase in students' problemsolving skills after learning to use E-LKPD. Furthermore, conducted by (Habsyi et al, 2022) that the results of the development of E-LKPD can improve critical thinking skills supported by several features in the E-LKPD application. Research was also conducted by (Aulia et al, 2021) which showed that E-LKPD can train students' critical thinking skills and support learning activities. Furthermore, research by (Indriani. Sakti et al, 2022) resulted in E-LKPD being able to encourage students' critical thinking skills to increase relatively. Research conducted by (Rizkika et al, 2022) the results of the development of E-LKPD improve the critical thinking skills of students and with the use of interesting E-LKPD make them more enthusiastic about learning, not bored, and mastering learning.

B. METHOD

1. Research Methods

This research is included in the category of development research or R&D. Research and development is a process or approach to validating and developing products, according to (Robert Maribe Brach et al, 2009) (Hidayat, Fitria et al, 2021) in validating a product means that the product already exists, and the researcher only tests the effectiveness or validity of the product. Product development can include improving existing products so that they become more practical, effective, and efficient, or making new and better products. Research and Development is a method that aims to produce a specific product. Research into educational problems can help develop and implement more innovative education (Okpatrioka et al, 2023).

2. Research and Development Procedures

Based on the ADDIE model learning design scheme, because researchers use ADDIE with a procedural approach, according to (Robert Maribe Brach et al, 2009) (Hidayat, Fitria et al, 2021). the stages must be in accordance with the first procedure from analysis, design, development, implementation and the final stage evaluation.

3. Data Collection Techniques

Whether or not a study is valid depends on the type of data collection used to select the right method according to the type and source of data in the study. In this study, researchers utilized several data collection techniques, such as interviews, questionnaires or questionnaires, and observation

a. Interview

Data collection conducted face-to-face with informants is known as interviews. The success of obtaining data or information from the subject under study with this interview technique is highly dependent on the researcher's ability to conduct interviews (Cahya, et al 2021). From the explanation above, it can be concluded that the success of the interview is determined by the ability of the researcher when conducting interviews with informants. So the researcher must master the questions so that the objectives are achieved as planned.

b. Walkthrough

According to Mardhiyanti, walkthrough is a method of collecting data needed for development research. Conducted with an expert, this expert will provide comments or recommendations on the product that has been developed (Dewi et al, 2024). From the expert's opinion that walkthrough is the E-LKPD in this study that has been made by the researcher, given to the validator according to his expertise. Media, language, and material experts, to see whether the product developed is in accordance with the criteria and whether it is feasible to be tested in the field. All these comments will be improved by researchers so that the product developed becomes a perfect product and in accordance with development procedures

c. Questionnaires or Questionnaires

A questionnaire or questionnaire is a list of questions given to other people who are willing to provide answers according to the user's request. The purpose of distributing

questionnaires is to get complete information about problems and respondents without worrying if they give answers that are not in accordance with reality (Syarifuddin et al, 2021).

d. Observation Technique

Observation is a data collection technique by observing and recording directly at the research location. This observation is carried out directly on the subject by means of direct observation and recording at school (Nuvitasari, et al 2019). This observation is used to observe students' activities in using E-LKPD in Pancasila Education subjects at Sri Jaya Negara High School Palembang

e. Data Analysis Technique

According to Sugiyono (Melyza and Agus et al, 2021), data analysis technique is a step in finding and systematically collecting data obtained from interviews, field notes, and documentation of the results by organizing data into categories, describing them sequentially into patterns, selecting which data are considered important and which data will be studied, and making conclusions so that they are easily understood by oneself and others.

Quantitative and descriptive data analysis were used in this study. The results of feasibility validation or validity are quantitative data sources, while criticism, suggestions, and input from validators are descriptive data sources (Maulina et al, 2022). A tool, namely, used to analyze data from media experts, material experts, and linguists as well as students' responses using a Likert scale. According to Sugiyono, the Likert Scale is a scale used to measure attitudes, opinions, and perceptions of a person or group of people about social phenomena (Syarifuddin et al, 2021). Data analysis of product feasibility and learner responses is carried out as follows.

4. Feasibility Analysis of Case Method-Oriented E-LKPD with DocFly Assistance

The data analysis technique used in this research is descriptive statistical analysis. The following are the steps to analyze the feasibility of E-LKPD oriented to the case method with the help of docfly:

- a. By using the 4-choice Likert scale method, the questionnaire results are given with assessment criteria for the instrument, which has a score of 5, 4, 3, 2, and 1 the assessment criteria used refer to Sugiyono which has been modified can be seen in Table.

Table 1. Classification of Assessment Criteria for Instruments

Assessment Criteria	Score
Very Feasible / Strongly Agree	5
Appropriate/ Agree	4
Reasonable/neutral	3
Inadequate/Lack of Agree	2
Not Worthy / Disagree	1

Source: (Sugiyono et al, 2022: 69), obtained by researchers (2025)

- b. Calculating the percentage of feasibility from material experts, media experts, and linguists using the average percentage formula according to (Rustandi et al, 2021) as follows:

$$Xi = \frac{\sum S}{S_{max}} \times 100\%$$

Description:

Xi = Feasibility value for each aspect

$\sum S$ = Total Score

S_{max} = Maximum Score

The results of the percentage score obtained from the research are interpreted in the following table criteria:

Table 2. Percentage and Feasibility Criteria	
Percentage	Criteria
81% - 100%	Very Feasible
61% - 80%	Feasible
41% - 60%	Feasible
21% - 40%	Less Feasible
< 21%	Not Feasible

5. Practicality Analysis of Case Method-Based E-LKPD with the Help of DocFly

The data analysis technique used in this research is descriptive statistical analysis. The following are the steps to analyze the practicality of E-LKPD based on case method with the help of docfly:

- a. By using the 4-choice Likert scale method, the questionnaire results are given with the assessment criteria for the instrument, which has a score of 5, 4, 3, 2, and 1 the assessment criteria used refer to Sugiyono which has been modified can be seen in Table:

Table 3. Classification of Assessment Criteria for Instruments

Assessment Criteria	Score
Very Feasible / Strongly Agree	5
Appropriate/ Agree	4
Reasonable/ neutral	3
Inadequate/ Lack of Agree	2
Not Worthy / Disagree	1

Source: (Sugiyono et al, 2022: 69), obtained by researchers (2025)

- b. Calculating the percentage of practicality from the one to one evaluation and small group evaluation stages using the percentage formula according to (Gulo and Harefa et al, 2022) as follows:

$$P = \frac{\sum x}{\sum xi} \times 100\%$$

Description:

P = Percentage

Σx = Total score from respondents

Σxi = Total score of ideas

The percentage score results obtained from the research are interpreted in the following table criteria:

Table 4. Percentage and Practicality Criteria

Percentage	Criteria
81% - 100%	Very Practical
61% - 80%	Practical
41% - 60%	Moderately Practical
21% - 40%	Less Practical
0% - 21%	Not Practical

6. Analysis of Critical Thinking of Learners

Analysis of student critical thinking observation data is carried out in order to determine the level of critical thinking ability of students. The steps stated by (Dewi et al,2024) in analyzing the results of students' critical thinking are: 1) The teacher puts a check mark (✓) on each descriptor that appears on the observation sheet. 2) Each descriptor that appears per-item on the observation sheet is summed up, and then the results of the assessment are summed up and percented using the following calculation:

$$\text{Percentage} = \frac{\text{Number of descriptors that appear}}{\text{Maximum number}} \times 100\%$$

Table 5. Benchmark Assessment Criteria (PAP) in Critical Thinking Ability of Students

Percentage	Category
90 - 100	Very High
80 - 89	High
65 - 79	Medium
55-54	Low

Source: (Pasundan, 2024)

C. RESULTS AND DISCUSSION

1. Description of the Development Stage of Case Method-Oriented E-LKPD with the Help of DocFly

a. Results of the Analysis Stage

In this analysis stage, researchers obtained findings regarding the needs analysis of Pancasila education at Srijaaya Negara High School Palembang. To collect initial observation data, needs analysis was carried out by conducting interviews with teachers of Pancasila education class XI at Srijaaya Negara High School Palembang. The results of the interview were used to analyze the needs that are a problem in learning,

especially in the learning process of Pancasila education. This analysis found that the use of E-LKPD has never been applied at Srijaya Negara High School Palembang. Teachers in the learning process use conventional E-LKPDs or use from the textbooks used. As a result, the amount of electronics designed and materials used is still very limited, making it unattractive to use during learning. All learners have different interests and talents, so teachers must make lessons as interesting as possible so that learning objectives are achieved. Teachers in the learning process really need interesting teaching techniques and learning resources. The use of interesting teaching materials certainly looks at the needs of students and the development of the current era. It is recommended to use media that emphasizes case method-oriented learning, which can help develop students' critical thinking skills. To improve students' critical thinking skills during the learning process, researchers developed case method-oriented E-LKPD.

b. Results of the Design Stage

After conducting the analysis, researchers designed or designed the developed items. The purpose of this case method is to make an initial design design through the design of E-LKPD and research instruments. The concept and product material determine the design. Content descriptions, learning objectives, material summaries, and learning evaluations are included in the initial E-LKPD design. After the data were collected, the researcher created a case method-oriented E-LKPD design with the help of docfly. The E-LKPD design is also known as electronic LKPD, according to the method used, namely cases, where students are given the opportunity to analyze cases to improve students' critical thinking skills.

Before becoming a cornerstone, the idea development stage ends with a finished dign. The designed product will be created and validated. The products created also include a combination of text and video. At this point, the teaching materials used will be incorporated into the E-LKPD product through the docfly platform. This method is an electronic-based LKPD consisting of a cover, learning materials consisting of learning videos, work instructions. Researchers use the docfly platform to convert LKPDs into E-LKPDs, which allow students to be active and make it easier for students to learn both online and offline

c. Development Stage Results

At this stage, the product design is being implemented. This step is based on the final storyboard developed by the researcher. At this point, the researcher adds columns to fill in, video links, graphics, and other features. After the researcher describes the process flow using menus, features and others. Researchers then consulted it to the supervisor to get validation. After this stage the researcher will consult it to the validator, the validator consists of 3, namely material, language, and media experts. This is done to get suggestions and comments in making improvements to the product developed before testing it to students.

d. Implementation Stage Results

This implementation stage was carried out in class XI.I SMA Srijaya Negara Palembang. At this stage aims to see the response of students to the case method-

oriented E-LKPD with the help of docfly developed by researchers and aims to assess how effective the application of the model or approach is, the aim is to provide suggestions for improving the application of the model in the future.

e. Self Evaluation Result

At this time, researchers reviewed the case method-oriented E-LKPD for the design that had been developed. This was done to reduce common errors in the case method-oriented E-LKPD created. The researcher found some errors and shortcomings in the re-testing process, to ensure that the design appearance was in accordance with the docfly website. These errors included sentence writing, not writing the source directly, and inappropriate use of colors. Then the researcher corrected the errors and shortcomings. Prototype is the result of the researcher's revision of the initial design of case method-oriented E-LPD.

f. Expert Review Result

At this stage, the content created is given to experts in the fields of material, language, and media to validate and evaluate the feasibility of the products developed. Material, language, and media are the three main components of product feasibility assessment. At first, researchers verified the case method-oriented E-LKPD materials. Mrs. Mariyani, S.Pd., M.Pd., Civics lecturer as a material validator. The material expert validator used a material validation sheet to provide a validity assessment. The results of the validation of the case method-oriented E-LKPD material expert are presented in Table below.

Table 6. Validation of Material Expert Assessment on Case Method Oriented E-LKPD

No	Indicator Assessment	Item Assessment	Value
1	Depth and breadth of material in E-LKPD	The material in the case method oriented E-LKPD contains critical thinking skills	4
		The material contains the implementation of case-based learning.	4
		The material is related to human rights (HAM).	4
		The material contains a real problem in everyday life.	4
		The material is relevant to the structure of the curriculum.	5
2	Clarity and suitability of presentation	The material presented in the case method-oriented E-LKPD is clear	4
		The material in the E-LKPD The material presented in the case method-oriented E-LKPD is complete.	4
		The material presented in the case method-oriented E-LKPD does not contain gibberish meaning.	5
		The material presented in the E-LKPD is easy to understand.	5
3	The suitability of case examples with the material	The material has suitability with case examples.	4

		The case examples given are real that exist in life.	5
4	Conformity of E-LKPD with case method	E-LKPD centers the problem to be solved. a. The problems in E-LKPD are in accordance with the learning material. b. The problems in E-LKPD are interesting to solve. c. The problems in E-LKPD are in accordance with the level of thinking development of students.	5 5 4 5
		E-LKPD is done in collaboration. a. The work steps in the E-LKPD require students to solve problems. b. E-LKPD trains students to work together to help each other.	5 5
		E-LKPD makes students more responsible. a. E-LKPD makes students more challenged to solve problems. b. E-LKPD makes it easier for students to complete tasks	5 5
		Activities in E-LKPD use the scientific procedure of the case method. a. Learners can find problems in E-LKPD. b. Learners define problems in E-LKPD c. Learners collect facts and various sources that support. d. Learners seek the truth of the data obtained by analyzing the problem. e. Learners discuss alternative problem solving.	4 4 5 4 5
5	Tests, assignments, support mastery of the material	Tasks support mastery of case method-oriented material.	5
Total Score			109
Percentage of Material Expert Feasibility Assessment			91%

Source: Primary data processed by researchers, 2025

Table 6 shows the percentage of feasibility assessment by the material expert is 91% which indicates that the material on the case method-oriented E-LKPD is in the very feasible category. This uses the (Rustandi et al, 2021) average percentage formula as follows:

$$\text{Percentage} = \frac{\text{Total score of all respondents}}{\text{Total ideal score}} = \frac{109}{120} \times 100\% = 91\%$$

The following table shows the material expert's suggestions regarding the case method-oriented E-LKPD and the researcher's follow-up to the suggestions. The material expert suggested that the researcher change the questions by using the C4

level, namely elaborate or identify or adjust the learning outcomes. Furthermore, the researchers involved linguists to validate the language in the case method-oriented E-LKPD. The language validator was Mr. Fernando Onas, S.Pd., M.Pd. lecturer in personality development courses (MPK). The results of the language validation evaluation are presented in table below:

Table 7. Validation of Language Expert Assessment on Case Method Oriented E-LKPD

No	Indicator Assessment	Item Assessment	Value
1	Clarity of title and subtitle.	The size of the title font in the E-LKPD can be seen clearly.	4
		The font size of the subtitle in the E-LKPD can be seen clearly.	5
2	Ease of language.	The language used in the E-LKPD is in accordance with spelling rules.	5
		The language used in E-LKPD is easy for students to understand.	5
3	Use of sentence words.	The use of words in E-LKPD is easy for students to understand.	5
		The use of terms in E-LKPD is easy for students to understand.	5
		The use of sentences used does not have double meanings.	5
		The use of words in the E-LKPD is not wordy.	5
4	The attractiveness and suitability of language to the environment of learners	The language used in E-LKPD attracts learners.	5
		The language used in E-LKPD is good and correct Indonesian.	5
Total Score			49
Percentage of Material Expert Feasibility Assessment			98%

Source: Primary data processed by researchers, 2025

Table 7 shows the percentage of feasibility assessment by linguists which is 98% which indicates that the use of language in case method oriented E-LKPD is in the very feasible category. This uses the (Rustandi et al, 2021) average percentage formula as follows:

$$\text{Percentage} = \frac{\text{Total score of all respondents}}{\text{Total ideal score}} \times 100\% = \frac{49}{50} \times 100\% = 98\%$$

The following table shows the linguist's suggestions regarding the case method-oriented E-LKPD and the researcher's follow-up to the suggestions. Linguists

suggested that researchers change the color of the text to a lighter one, pay attention to writing and commas in learning activities, and the list of references is adjusted to the rules. After the linguists, the researchers involved media experts to validate the E-LKPD with Dr. Erna Retna Safitri, S.P., M.Pd. a lecturer in the PGSD study program and a master's student in the TP study program, acting as a media validator. The following are the results of the assessment of media experts presented in table below:

Table 8. Validation of Media Expert Assessment on Case Method Oriented E-LKPD

No	Indicator Assessment	Item Assessment	Value
1	The quality of the display page of the case method oriented E-LKPD cover with the help of docfly.	The color of the case method-oriented E-LKPD cover with the help of docfly supports the creation of a unique and attractive cover design.	4
		The design on the E-LKPD cover page is related to the case method-oriented material with the help of docfly.	4
		The selection of the type of writing in the case method-oriented E-LKPD with the help of docfly is appropriate.	5
		The design on the cover of the case method-oriented E-LKPD with the help of docfly is attractive.	5
2	Clarity of objectives	The systematic presentation of material in the case method-oriented E-LKPD is easy to understand to achieve competence.	5
		The systematic presentation of tasks in the case method-oriented E-LKPD is easy to understand to achieve competence.	5
		Systematic presentation of tests in case method-oriented E-LKPD is easy understood to achieve competence.	5
3	The accuracy of the presentation format in the case method-oriented E-LKPD with the help of docfly	The display design of the case method-oriented E-LKPD with the help of docfly used is in accordance with the content or material.	4
		The display design of the case method-oriented E-LKPD with the help of docfly used in accordance with the writing uses the right type of size.	4
		The display design of the case method-oriented E-LKPD with the help of docfly used in accordance with case examples or images in accordance with material.	4
		The display design of the case method-oriented E-LKPD with the help of docfly used is in accordance with the quality of the display given clearly.	5
4	Use of type of writing in case method-oriented E-LKPD with docfly assistance	The use of type of writing in case method-oriented E-LKPD with docfly assistance is clear.	5

		The use of type of writing in case method-oriented E-LKPD with the help of docfly is legible.	5
		The use of writing type in case method-oriented E-LPD with the help of docfly is interesting.	5
5	Use of font size in case method-oriented E-LKPD with docfly assistance	The use of font size in case method-oriented E-LKPD with docfly assistance is clear.	5
		The use of writing size on case method-oriented E-LKPD with the help of docfly is legible.	5
		The use of writing size on case method-oriented E-LPD with the help of docfly is interesting.	4
6	Presentation of case examples or images on case method-oriented E-LKPD with docfly assistance	Presentation of case examples or images on case method-oriented E-LKPD with docfly assistance is clear	5
		Presentation of case examples or images on case method-oriented E-LKPD with the help of docfly is interesting.	5
		Presentation of case examples or images on case method-oriented E-LKPD with the help of docfly captivates the attention of students.	4
7	Appropriateness with learners' characteristics	Presents language that is easy to understand for learners.	4
		Presents an overview of case method-oriented learning activities that are easy for learners to understand.	4
		Presents sentences that are easy for students to understand.	4
Total Score			105
Percentage of Material Expert Feasibility Assessment			91%

Source: Primary data processed by researchers, 2025

Table shows the percentage of feasibility assessment by media experts which is 91% which indicates that the media display on the case method-oriented E-LKPD is in the very feasible category. This uses the (Rustandi et al, 2021) average percentage formula as follows:

$$\text{Percentage} = \frac{\text{Total score of all respondents}}{\text{Total ideal score}} \times 100\% = \frac{105}{115} \times 100\% = 91\%$$

The following table shows the media expert's suggestions regarding the case method-oriented E-LKPD and the researcher's follow-up to the suggestions. The media expert suggested that researchers write down the source of the video, the text on the material is not too full by enlarging the text, and improve the instructions on the questions. The

researcher can conclude that the case method-oriented E-LKPD with the help of docfly developed in the form of a prototype is included in the feasible category based on the results of the assessment and suggestions of the experts above. The results of the researcher's improvement of the case method-oriented E-LKPD with the help of docfly based on the experts' suggestions have been implemented in the E-LKPD.

g. Results of One to one Evaluation

The purpose of this stage is to assess the practicality and evaluate the results of the expert evaluation of the case method-oriented E-LKPD product with the help of docfly that has been developed. The researcher involved three students from class XI at Sri Jaya Negara High School Palembang with low, medium, and high ability levels. The researcher asked for help from the teacher who taught Pancasila Education in the class to determine the standard of students. The case method-oriented E-LKPD prototype with the help of docfly will be asked to selected students through a questionnaire sheet. The questionnaire uses a Likert scale with five answer options, namely: Strongly Agree (SS) means that the case method-oriented E-LKPD is very good and interesting, Agree (S) means that the E-LKPD is good, Neutral (N) means that the E-LKPD is quite good, Disagree (KS) means that the E-LKPD is not good, and Disagree (TS) means that the E-LKPD is not good and not interesting. Using the results of students' responses to the case method-oriented E-LKPD at the one to one evaluation stage, researchers changed the product prototype. The results of one to one evaluation are as follows: Results of Learner Comments on Case Method Oriented E-LKPD with DocFly Assistance Activity Stage One to One Evaluation.

Table 9. The results of one to one evaluation

No.	Name of Learner	Score
	AKA	35
	GAM	39
	NSR	34
Total		108
Results		80%

Source: Primary data processed by researchers, 2025

The results of the learners' assessment of the case method-oriented E-LKPD with the help of docfly at the one to one evaluation activity stage show that the practical value of 80% is included in the practical category, as shown in table. The results of the calculation analysis produce the average results of the learners' assessment according to (Gulo and Harefa et al,2022) as follows:

$$\text{Practicality Score} = \frac{\text{Score Acquisition}}{\text{ideal score}} = \frac{108}{135} \times 100\% = 80\%$$

The results of comments from students on E-LKPD oriented case method stage one to one evaluation as follows:

Based on the description above, the case method-oriented E-LKPD with the help of docfly developed by researchers meets the practical category, as shown by the description of the results of the expert review stage and the one to one evaluation stage.

h. Small Group Evaluation Results

In the small group evaluation stage, researchers tried the case method-oriented E-LKPD with the help of docfly. prototype 2, on six grade XI students at Sri Jaya Negara High School Palembang. All learners were selected based on academic ability, namely two learners with high achievement, two learners with medium achievement, and two learners with low achievement. The Pancasila Education teacher who taught the class suggested the selection of the six learners.

After the learning ended, learners were given a questionnaire of case method-oriented E-LPDs with the help of docfly to determine their responses. A Likert scale was used, with five answer options: Strongly Agree (SS) means the case method-oriented E-LKPD is very good and interesting, Agree (S) means the E-LKPD is good, Neutral (N) means the E-LKPD is quite good, Disagree (KS) means the E-LKPD is not good, and Disagree (TS) means the E-LKPD is not good and not interesting. Using the results of students' responses to the case method-oriented E-LKPD at the small group evaluation stage, researchers changed the product prototype. The results of the small group evaluation are as follows:

Results of Learners' Assessment of Case Method-Oriented E-LKPD with DocFly Assistance at the Small Group Evaluation Activity Stage

Table 10. Results of Learners' Assessment

No.	Name of Learner	Score
	ADA	37
	AR	43
	KR	37
	MF	40
	MKRM	40
	PN	36
Total		233
Results		86%

Source: Primary data processed by researchers, 2025

The results of the learners' assessment of the case method-oriented E-LKPD with the help of docfly at the small group evaluation activity stage show that the very practical value of 86% is included in the very practical category, as shown in table The results of the calculation analysis produce the average results of the students' assessment according to (Gulo and Harefa et al, 2022) as follows.

$$\text{Practicality Score} = \frac{\text{Score Acquisition}}{\text{Total Score}} \times 100\% = \frac{233}{272} \times 100\% = 86\%$$

The case method-oriented E-LKPD with the help of docfly developed by the researcher meets the category of very feasible and very practical, as shown by the description of the results of the expert review stage, the one to one evaluation stage, and the small group evaluation.

i. Field Test Results

The purpose of the field test stage is to determine and evaluate the potential influence of using case method-oriented E-LKPD with the help of docfly in Pancasila Education subjects on students' critical thinking skills. At this stage, researchers will use case method-oriented E-LKPD products with docfly assistance that have been developed for the Pancasila Education learning process. For case method-oriented E-LKPD products with the help of docfly, the results have shown that it is very feasible by experts, practical at the one to one evaluation stage, and very practical at the small group evaluation stage from the assessment of students.

At this stage, researchers involved all students in class XI 5, totaling 32 students. In the learning process, Pancasila education subjects were taught through case method-oriented E-LKPD with the help of docfly. At this stage, the research was conducted in one meeting. During the meeting, the researcher taught learners to prepare their cellphones to access the case method-oriented E-LKPD link with the help of docfly that had been distributed by the researcher. After all learners opened the link, the researcher informed them about the purpose and learning objectives.

To find out the potential effect of using case method-oriented E-LKPD with the help of docfly on students' critical thinking skills, the researcher asked the Pancasila education subject teacher to use the students' critical thinking observation sheet that the researcher had prepared. In this study using indicators put forward by Ennis (Arif and Cahyono, 2020), namely how students focus questions to clarify information, analyze arguments, convince answers from various sources, make deductions and consider the results of deduction, make induction and consider the results of induction, identify the assumptions underlying a question, and determine the actions that need to be taken to achieve goals and interact with others in obtaining information or achieving information.

The calculation of the table above shows 79% for the first indicator, namely focusing questions to clarify information asking and answering questions, it is included in the category of moderate critical thinking skills. Furthermore, the second indicator shows the result of 85%, namely analyzing arguments, it is included in the high critical thinking ability category. Then the third indicator shows 79% results with indicators of convincing answers from various sources, it is included in the category of moderate critical thinking skills. The fourth indicator shows a result of 73% with an indicator of making deductions and considering the results of deductions, it is included in the category of moderate critical thinking ability. The fifth indicator shows a result of 79% with an indicator of making induction and considering the results of induction, it is

included in the category of moderate critical thinking ability. The sixth indicator shows 86% results with an indicator of identifying the assumptions underlying a question, it is included in the high critical thinking ability category. Furthermore, the last indicator shows 95% results with indicators of determining the actions that need to be taken to achieve goals and interact with others in obtaining information or achieving information, it is included in the category of very high critical thinking ability.

So that the results of all indicators of critical thinking of students can be obtained at 81%, this shows that case method-oriented E-LKPD has high potential in improving students' critical thinking skills. The recapitulation of observations of students' critical thinking after the learning process is carried out using the application can be seen in table below:

$$\text{Percentage} = \frac{\text{Number of descriptors that appear}}{\text{Maximum amount}} = \frac{260}{320} \times 100\% = 81\%$$

The above calculation shows that 81% of students have high critical thinking skills, out of the total students, one student is in the low category, eight students are in the medium category, seventeen students are in the high category, and six students are in the very high category. Researchers found that improving the critical thinking skills of students in class XI Pancasila Education SMA Srijaya Negara Palembang can be achieved through the development of case method-oriented E-LKPD that has been implemented. 81% of learners have high critical thinking skills. The results of the analysis of students' critical thinking are based on conclusions from observations.

2. DISCUSSION

The results showed that the case method-oriented E-LKPD developed by this researcher supported the learning process at Srijaya Negara High School Palembang. In addition, the results also show that case method-oriented teaching materials can improve students' critical thinking skills. This is evident from the calculation of each critical thinking indicator in the table above showing the results of 79% for the first indicator, namely focusing questions, this is in line with research by (Fernanda, et al 2019) which concluded that the use of case method-oriented teaching materials was able to analyze the critical thinking skills of students on the aspect of focusing questions to clarify information asking and answering questions or problems in a case or problem. Learners study a case and understand it, then formulate questions or problems related to the case and the ability to find and use current facts about a problem to find a solution.

Then the second indicator shows a result of 85%, namely analyzing arguments, this is in line with research conducted by (Siregar, et al 2024) that the indicator of analyzing arguments has increased after using case method-oriented E-LKPD, students not only gain an understanding of the material but are also trained to think critically and express opinions in a structured manner through this method. This makes great progress in interactive learning approaches that can be used in the math and science education of high school students. The

third indicator shows a result of 79%, namely convincing answers from various sources, this is in line with research conducted by (Fauzi, et al 2022) saying the case learning method gives students the opportunity to develop their abilities or potential by finding case-solving solutions. This is a challenge for each learner, so learners will try themselves to get the information needed to solve the case problem. Learners will definitely explore their potential under these conditions. Case-based learning involves real situations that require critical thinking reasoning to consider solutions.

Furthermore, the fourth indicator that shows a result of 73% is making deductions and considering the results of deductions, this is in line with the results of research by (Arif, et al 2020) that can improve students' critical thinking skills. Learners are faced with real problems that require analysis and decision making, and they are trained to make deductions based on the information they have. Especially when used in conjunction with interactive learning media, it can improve learners' understanding of abstract concepts. Then for the fifth indicator shows a result of 79%, namely making induction and considering the results of induction, this is in line with research conducted by (Isnaini, et al 2015) in obtaining the ability to induce and consider the results. Learners are invited to conduct experiments, see real phenomena, and analyze the results in this context. In addition to improving critical thinking skills, this also increases students' understanding of the concepts in the material.

The sixth indicator shows a result of 86%, namely identifying the assumptions underlying a question, this is in line with research conducted by (Dewangga, et al 2024) that the case method has been shown to improve students' critical thinking skills when applied in debate classes. The results show that learners are better at identifying assumptions, evaluating evidence, considering different perspectives, finding logical errors, and making reasonable conclusions. So as to improve learners' overall academic development, active learning strategies such as debates and case study activities are essential. Thus, case studies are useful tools to assist in the learning process.

The seventh indicator shows a result of 95%, namely with indicators of determining the actions that need to be taken to achieve goals and interacting with others in obtaining information or achieving information, this is in line with the findings of (Nurhikmayat et al, 2018) that experimental techniques improve students' critical thinking skills. The results show that the scientific approach is effective in improving critical thinking skills by encouraging learners to see and consider various perspectives by interacting in group discussions and exchanging information, which helps them determine what steps to take to achieve learning objectives.

Overall, the case-oriented learning approach helps learners improve their critical thinking skills and provides them with practical skills essential for the professional world. This method teaches learners to apply theory in real-world situations, preparing them for future challenges. Case method gives learners the opportunity to practice their critical thinking skills tailored to their grade level abilities. In this case method, learners analyze, discuss, find various information from various sources and so on. This making learners think critically and actively.

D. CONCLUSIONS AND SUGGESTIONS

According to the results of their research and analysis, the researchers found that the case method-oriented E-LKPD is valid, practical, and has the potential to improve learners' critical thinking. This teaching material fulfills the needs of case method-oriented learning, such as case videos, discussions, questions, and other media. The results of material, language, and media expert validation show the feasibility of E-LKPD. The average material expert assessment was 91% (very feasible category), linguist assessment was 98% (very feasible category), and media expert assessment was 91% (very feasible category). The one-to-one evaluation and small group evaluation assessed the effectiveness of the case method-oriented E-LKPD. In the one-to-one evaluation, the E-LKPD scored 80% (practical category), and in the small group evaluation, the E-LKPD scored 86% (very practical category). The field test showed that the E-LKPD could improve students' critical thinking with a score of 81% high.

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