



Development of PPKn worksheet using problem-based learning to improve critical thinking

Jesika Sitorus¹, Dede Ruslan², Rosmala Dewi³

^{1,2,3}Universitas Negeri Medan, Kota Medan, Indonesia

jesica07031999@gmail.com¹, dederuslan0407@gmail.com², ros_dwi@unimed.ac.id³

ABSTRACT

The need for learning that is able to improve critical thinking skills, active participation of students, and suitability for children's cognitive development. This research aims to develop Problem-Based Learning (PBL) based Pancasila Education (Pendidikan Pancasila dan Kewarganegaraan or PPKn) student worksheets (Lembar Kerja Peserta Didik or LKPD) on the material "Aku Patuh Aturan" for grade III students of SDN 101912 Pagar Merbau. This research uses a modified ADDIE development model, including the stages of analysis, design, development, implementation, and evaluation. The instruments used were validation sheets, response questionnaires, and multiple-choice patterned pre-test-post-test tests. Data analysis was carried out descriptively and quantitatively using percentages for feasibility and practicality and comparative analysis for effectiveness. The validation results showed that the LKPD was very valid from the aspects of material, media, and language. Practicality tests on a small group and field trials resulted in a very practical category based on teacher and student responses. The effectiveness evaluation revealed a significant increase in students' critical thinking skills, with the percentage of completed students increasing from 4.5% to 81.8%. These findings strengthen the conclusion that PBL-based LKPD is feasible to use and effective in improving critical thinking of elementary school students.

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ABSTRAK

Kebutuhan pembelajaran yang mampu meningkatkan keterampilan berpikir kritis, partisipasi aktif murid, dan kesesuaian dengan perkembangan kognitif anak. Penelitian ini bertujuan mengembangkan Lembar Kerja Peserta Didik (LKPD) Pendidikan Pancasila berbasis Problem-Based Learning (PBL) pada materi "Aku Patuh Aturan" untuk murid kelas III SDN 101912 Pagar Merbau. Penelitian ini menggunakan model pengembangan ADDIE yang dimodifikasi meliputi tahap analisis, desain, pengembangan, implementasi, dan evaluasi. Instrumen yang digunakan berupa lembar validasi, angket respons, dan tes pre-test-post-test berpola pilihan ganda. Analisis data dilakukan secara deskriptif kuantitatif menggunakan persentase untuk kelayakan dan kepraktisan serta analisis perbandingan untuk efektivitas. Hasil validasi menunjukkan LKPD sangat valid dari aspek materi, media, dan bahasa. Uji kepraktisan pada uji coba kelompok kecil dan lapangan menghasilkan kategori sangat praktis berdasarkan respons guru dan murid. Evaluasi efektivitas mengungkapkan peningkatan signifikan keterampilan berpikir kritis murid, dengan persentase murid tuntas bertambah dari 4,5% menjadi 81,8%. Temuan ini memperkuat kesimpulan bahwa LKPD berbasis PBL layak digunakan dan efektif dalam meningkatkan berpikir kritis murid sekolah dasar.

Kata Kunci: berpikir kritis; lembar kerja peserta didik; LKPD; pendidikan Pancasila; problem-based learning

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INTRODUCTION

The global changes of the 21st century require students to master critical, collaborative, creative, and communicative thinking skills as part of their core competencies (Milala *et al.*, 2024). Pancasila and Civic Education (PPKn) play an important role in shaping students' adaptive and solution-oriented characters through contextual learning (Ahmad & Hidayat, 2020; Khairunnisa *et al.*, 2024). The urgency of strengthening Civic Education lies in its role as a vehicle for character building, moral development, and national awareness from an early age. Civic Education not only serves to instill knowledge about the values of Pancasila and the constitution, but also develops critical thinking skills in dealing with social issues in the surrounding environment (Hakim *et al.*, 2021). Strengthening the cognitive and affective dimensions of PPKn learning is urgently needed so that students can understand the meaning of compliance with rules as the basis for shaping the behavior of responsible citizens.

The condition of Civic Education learning in various elementary schools, including SDN 101912 Pagar Merbau, shows a tendency to still focus on the lecture method. The learning process does not fully involve students in active, exploratory, and collaborative thinking activities. The conventional theoretical approach needs to be replaced by active learning models such as Problem-Based Learning (PBL), which has been proven effective in developing higher-order thinking skills. (Akbar *et al.*, 2023; Rahmawati & Wardani, 2023). The application of PBL in LKPD allows students to understand concepts through solving real problems, so that the values of compliance and responsibility can be internalized more deeply (Mukhlisotin & Rahmandani, 2023; Zumratul *et al.*, 2023). The lack of technology utilization and limitations in teacher pedagogy result in low critical thinking stimulation in the classroom (Widiya & Radia, 2023).

This makes it difficult for students to understand abstract concepts, choose appropriate words to convey ideas, and formulate solutions to citizenship issues because textbook material is not presented contextually and comprehensively (Aisah *et al.*, 2022; Ali & Ratnaningsih, 2023; Utari *et al.*, 2022). This problem highlights the need for learning interventions that are not only instructional but also participatory. The PBL model provides opportunities for students to build conceptual understanding through the study of real problems and the collaborative process of solving them (Khakim *et al.*, 2022; Rahma *et al.*, 2023). Through the application of this model, Civics Education learning becomes more meaningful and capable of developing critical thinking competencies in a structured manner (Handoyo *et al.*, 2024). Critical thinking competencies in the context of Civics Education learning have a strategic role because they are directly related to understanding the basic values of the state, legal norms, and civic behavior (Aisyah & Gumala, 2025; Sholihah & Amaliyah, 2022).

Students who have critical thinking skills are capable of understanding the differences between rights and obligations better, as well as assessing the implications of actions that violate rules in a social environment (Khoirunni'ma *et al.*, 2024). Therefore, critical thinking skills are among the indicators of success in implementing Civic Education at the elementary school level. The PBL model was chosen because it provides a learning experience that places students at the center of learning activities. This learning model is relevant to the needs of elementary school students, who must be trained to think critically, collaborate, and solve problems in real-world contexts. The application of this model is expected to create a more interactive and meaningful learning process, especially in understanding the value of compliance with rules in Civic Education subjects (Rosita *et al.*, 2024). Each stage of the PBL learning model is designed to create meaningful, contextual learning experiences and foster personal responsibility for the process of thinking and problem solving.

The "I Obey the Rules (*Aku Patuh Aturan*)" material in Civic Education provides the right space for the application of the PBL model because it is closely related to students' daily lives, especially in terms of discipline, responsibility, and awareness of behaving according to norms. This context encourages

students' emotional and intellectual involvement in exploring the meaning of Pancasila values in concrete terms (Fathurrahman & Puspita, 2025). The application of PBL has been proven effective in increasing learning activities, strengthening the connection between real experiences and abstract concepts, and supporting the systematic development of critical thinking skills (Shefira *et al.*, 2024). The lack of research that specifically evaluates the direct impact of critical thinking skills development in Pancasila education at the elementary school level remains a challenge in strengthening evidence-based pedagogical practices (Astiwi *et al.*, 2020; Suharyati & Arga, 2023; Zakiah, 2021).

Available studies tend to focus on general cognitive aspects or are limited to measuring learning outcomes without exploring students' thinking processes in depth. Several previous studies have shown that the application of PBL in science and mathematics subjects has been proven to improve students' analytical, problem-solving, and collaborative work skills (Anbiya & Khaldun, 2023; Syahnia *et al.*, 2024). Similar applications in the context of the Indonesian language also show an increase in students' argumentation and reflection skills (Muna & Mujianto, 2023). These results indicate that the effectiveness of PBL in developing higher-order thinking skills has great potential for adaptation to normative learning, such as Pancasila Education. However, there is a gap in that PBL has not been optimally utilized in developing national values and social awareness through structured, problem-based learning.

This study is expected to fill this gap by providing empirical evidence on the effectiveness of PBL in improving critical thinking skills in the "I Obey the Rules (*Aku Patuh Aturan*)" material for elementary school students. This study aims to develop a PBL-based Pancasila Education Student Worksheet (LKPD) that is feasible, practical, and effective in improving elementary school students' critical thinking skills. The focus of development is directed at the "I Obey the Rules (*Aku Patuh Aturan*)" material in grade III of SDN 101912 Pagar Merbau, with the hope of producing teaching tools that not only meet expert validation standards but are also easy for teachers to use and capable of having a real impact on improving the quality of students' thinking. Through the application of the PBL model, the developed LKPD is expected to facilitate students in examining, analyzing, and solving problems critically and contextually in accordance with the characteristics of the Pancasila Education subject.

LITERATURE REVIEW

The Problem-Based Learning (PBL) learning model

The PBL learning model is rooted in constructivist theory, which places students at the center of the learning process. Students actively construct knowledge through interaction with contextual and meaningful problems presented in learning. PBL is designed to develop higher-order thinking skills, such as analyzing, synthesizing, and evaluating information in real-life situations (Khakim *et al.*, 2022; Rahmawati & Wardani, 2023). Its implementation involves structured stages, starting from orientation to the problem, organization of learning activities, guidance, independent and collaborative investigation, to the presentation of results and evaluation of the problem-solving process (Mayasari *et al.*, 2022; Paratiwi & Ramadhan, 2023; Sakti & Luthfiyah, 2024). The philosophical and psychological foundations of this model emphasize the importance of authentic and reflective learning experiences, enabling students to transfer knowledge to new contexts in a logical and critical manner. Studies conducted on the PBL model have shown its effectiveness in improving student learning outcomes, especially in exact subjects such as science and mathematics (Anbiya & Khaldun, 2023; Syahnia *et al.*, 2024).

The focus of measurement in these studies was largely on improving general cognitive learning outcomes, without examining in depth the contribution of PBL to critical thinking skills in the context of normative learning, such as Pancasila Education (Dermawan & Maulana, 2023; Khovivah *et al.*, 2022). A comprehensive conception of PBL not only emphasizes problem-solving activities but also integrates cognitive, social, and metacognitive dimensions that form a holistic learning experience. Students are

guided to develop collaboration, communication, and self-reflection skills so that the learning process does not stop at finding answers, but also at understanding the thinking processes used (Setiawan *et al.*, 2024). This process enables the connection between conceptual understanding and practical application through authentic situations that require in-depth analysis, hypothesis formulation, and data-based conclusions (McArthur, 2023). The collaborative aspect of PBL also strengthens social responsibility and character building, as the success of problem solving is influenced by the collective contribution of the group (Herdiansyah, 2025). PBL serves as a means of integrating 21st-century skills, including critical thinking, creativity, communication, and collaboration, through contextual and meaningful learning.

Critical thinking skills in civic education learning

Critical thinking skills are essential cognitive competencies for elementary school students in developing a deep understanding of learning materials. The critical thinking process includes evaluating information, comparing different arguments, and drawing logical conclusions based on valid evidence and reasoning (Cahyani *et al.*, 2024; Suharyati & Arga, 2023). Keterampilan . Critical thinking skills are cognitive abilities that enable individuals to analyze information in depth, evaluate arguments, and make decisions based on rational considerations. Furthermore, this thinking process includes clarifying problems, testing assumptions, drawing inferences, and reflecting on the implications of a thought (Azizah & Prasetyo, 2023; Sofiyan *et al.*, 2024). These skills are not only useful in solving academic problems but also play a role in shaping students' rational, reflective, and responsible character in decision-making (Dermawan & Maulana, 2023). Critical thinking skills are classified as a key competency that students must possess in the 21st century because they are the foundation for facing complex and dynamic global challenges (Julisa *et al.*, 2023). Critical thinking indicators include the ability to interpret, explain, evaluate, and reflect on a situation based on evidence and logic (Sabarudin *et al.*, 2023).

Learning that integrates a problem-solving approach is considered to be able to encourage the activation of these higher-level cognitive processes more optimally. The application of critical thinking skills in Pancasila Education subjects plays a strategic role, as it is closely related to moral decision-making and social norm awareness. The instilling of values such as justice, discipline, and responsibility cannot be separated from students' ability to examine, compare, and draw conclusions about the underlying principles (Amelia & Hamidaturrohmah, 2025; Gustina & Jayadinata, 2023). However, there is still little research that explicitly examines critical thinking skills in the context of elementary school civic education material, especially on the topic of "I Obey the Rules (*Aku Patuh Aturan*)". Critical thinking skills are also seen as the foundation for the formation of civic literacy, which requires students to assess public issues, consider various perspectives, and construct arguments based on facts and ethical principles. This capacity not only supports academic success but also strengthens the role of students as reflective and responsible citizens in democratic life. This gap shows that the development of teaching tools that directly encourage critical thinking skills through the context of values learning is very important to be raised as a research focus.

Student Worksheets or Lembar Kerja Peserta Didik (LKPD)

Student Worksheets, or Lembar Kerja Peserta Didik (LKPD), are teaching tools designed to facilitate students' construction of knowledge through systematic, active, and contextual learning activities. Effective LKPD development must consider students' thought processes, material relevance, and the learning approach used. The development of PBL-based LKPD allows for the integration of problem-solving activities into learning tasks, so that students not only receive information but are also involved in an investigative process that encourages reflection and analysis (Hidayat *et al.*, 2024). The integration of content and activities embedded in LKPD is the key to successful, meaningful learning, especially in building conceptual understanding and critical thinking skills. The use of LKPD in civic education learning in elementary schools provides opportunities for teachers to present abstract material in a concrete and easy-to-understand manner for students. A good LKPD design is able to guide students to explore civic

values through contextual tasks, such as case analysis, group discussions, and personal reflection (Susilawati, 2024).

Several studies have shown that activity-based LKPD not only increases student engagement but also has an impact on the quality of their reasoning in responding to social issues (Mukhlisotin & Rahmandani, 2023; Zusratul *et al.*, 2023). This fact indicates that the development of LKPD should not only be oriented toward delivering material but also be designed as a pedagogical tool that supports the achievement of 21st-century competencies, including critical thinking, reflection, and responsiveness to social realities. The effectiveness of LKPD is also determined by the extent to which the instrument encourages metacognitive skills, namely the ability of students to monitor, evaluate, and manage their own learning strategies (Septiari, 2025). LKPD designed with this aspect in mind will help students not only complete tasks but also understand the thinking processes they engage in. The pedagogical implication of this approach is the creation of more independent and sustainable learning, as students become accustomed to reflecting on how they acquire knowledge and connecting it to their daily experiences.

METHODS

This study is a Research and Development (RnD) study to produce PBL-based LKPD that is feasible, practical, and effective in improving students' critical thinking skills in Pancasila Education subjects. The selection of the analysis, development, implementation, and evaluation (ADDIE) development model in this study is based on its systematic and flexible approach to produce valid, practical, and effective learning products according to students' needs. The research was conducted at SDN 101912 Pagar Merbau, Deli Serdang Regency, North Sumatra Province during the even semester of the 2024/2025 academic year. The subjects in this study were 22 third-grade students, while the object of the study was the development of worksheet products on the material "I Obey the Rules (*Aku Patuh Aturan*)" using the PBL model integrated into the Civic Education learning process.

The development procedure in this study adapted the ADDIE model, which consists of five stages, namely analysis, design, development, implementation, and evaluation. The analysis stage was carried out through observation, interviews, and curriculum review to identify learning needs and obstacles faced by teachers and students in teaching Civics Education on the material "I Obey the Rules (*Aku Patuh Aturan*)". The design stage focused on developing a worksheet design that included PBL syntax, critical thinking indicators, and learning activities appropriate for third-grade students. The development stage involved creating an initial version of the worksheet, which was then validated by subject matter experts, media experts, and classroom teachers to obtain feedback before revision. The implementation stage included limited trials (small groups) and field trials to observe student responses and the practicality of using the LKPD in the learning process. The evaluation stage was conducted to assess the effectiveness of the LKPD in improving students' critical thinking skills using pre- and post-tests, and to calculate N-Gain and relevant statistical tests to assess the significance of the improvement in students' abilities.

Data collection in this study used several instruments tailored to the objectives of each stage of development. Product validation was carried out using questionnaires given to subject matter experts, media experts, and classroom teachers to assess the feasibility of content, appearance, language, and integration with PBL syntax. The practicality of the LKPD was measured through student and teacher response questionnaires after small group trials and field tests. The effectiveness of the LKPD in improving critical thinking skills was assessed using a test instrument comprising pre- and posttest questions aligned with critical thinking indicators. Data analysis techniques for validation and practicality were conducted descriptively and quantitatively, using percentages and feasibility categories. Meanwhile, effectiveness was analyzed through normality tests, homogeneity tests, and independent sample t-tests to see the significance of the differences between the control and experimental groups. N-Gain calculations were used to determine the level of improvement in students' critical thinking skills after using PBL-based LKPD.

RESULTS AND DISCUSSION

Analysis Stage

The analysis stage serves as the initial foundation in the process of developing PBL-based LKPD to identify the gap between ideal learning conditions and the reality in the field. The results of observations and questionnaires administered to teachers and students in grade III at SDN 101912 Pagar Merbau indicate that learning remains dominated by lecture methods and task assignments without contextual media support. A total of 85% of teachers stated that PBL-based thematic LKPDs were not yet available, while 90% of teachers wanted teaching materials that encouraged active engagement and problem solving. More than 70% of students also preferred learning through fun, interactive, and easy-to-understand activities.

The suitability of the LKPD development for the used curriculum has also been analyzed. The school implements the Merdeka Curriculum with the main material "I Obey the Rules (*Aku Patuh Aturan*)" in grade III, theme II. This material was chosen because there is no LKPD specifically developed to support the achievement of these competencies. Learning outcomes and learning objectives have been mapped to ensure integration between the content and structure of the LKPD developed. In addition, student characteristics are an important consideration in the design of the media. Students aged 8-9 years are in the concrete operational stage according to Piaget, so the LKPD is designed with a concrete, visual, and contextual approach. Heterogeneous academic ability levels are also accounted for by preparing varied questions to maximize students' potential.

Design Stage

The design stage was conducted to develop initial PBL-based worksheets for the "I Obey the Rules (*Aku Patuh Aturan*)" material for third-grade students at SDN 101912 Pagar Merbau. The design process began with compiling the content framework of the worksheets in accordance with the learning outcomes in the Pancasila Education subject. The structure of the LKPD includes key elements such as the front and back covers, introduction, instructions for use, table of contents, learning outcomes, learning objectives, teaching materials, problem-based activities, exercises, and bibliography. The references used in developing the material were taken from relevant and up-to-date sources, including the Pancasila and Citizenship Education book published by the Ministry of Education, Culture, Research, and Technology in 2023.



Figure 1. PBL-based LKPD Design Storyboard
Source: Research 2025

The design of PBL-based LKPD content is based on a learning syntax that includes problem orientation, student organization, investigation guidance, presentation of results, and process evaluation. The presentation of material is tailored to the cognitive development stage of 8-9-year-old students, using a communicative, illustrative, and contextual presentation style to make it easier to understand. The visual design and content structure of the LKPD are presented as a storyboard that shows the sequence from the cover to the evaluation exercises, as shown in **Figure 1**.

The validation instrument, in the form of a questionnaire, was systematically designed to assess product feasibility with respect to content, appearance, and language. The questionnaire includes the developer's identity, an introduction for validators, scoring guidelines based on the Likert scale, and an assessment table covering validation indicators across three main aspects, namely material, visual design, and language. Each indicator is compiled based on the principles of relevance to the curriculum, readability, and suitability for elementary school students. The final section of the questionnaire includes a column for comments and suggestions to elicit qualitative input from validators, as well as a concluding statement on the product's validity based on the assessment results.

Development Stage

The development stage is carried out to realize the LKPD design and produce a real product ready for student testing. The initial product is compiled based on the design results, then validated by three parties, namely subject matter experts, media experts, and language experts, in order to obtain input on the suitability of the content, appearance, and language. Product validation aims to ensure that PBL-based LKPDs meet the substantive, technical, and pedagogical criteria set by the Pancasila Education learning standards. The results of the validation process are used to guide improvements and refinements to the product before it is implemented in learning trials. Validation by learning material experts focused on the content and preparation of LKPD based on indicators such as the suitability of the material to the competencies, the accuracy of the information, its currency, presentation, and its ability to stimulate students' curiosity. The results of the material experts' assessment of the initial LKPD product are presented in **Table 1**.

Table 1. Results of Material Expert Assessment

No	Indicator	Score
1	Materials' suitability to Basic Competencies	13
2	Materials' accuracy	21
3	Materials' recentness	10
4	Encouraging curiosity	7
5	LKPD Arrangement	5
6	Presentation of learning	25
Total		81

Source: Research 2025

The data in **Table 1** shows that the average percentage of feasibility reached 85.88% with a category of highly valid. Although generally considered feasible for testing, several indicators, such as material accuracy and learning presentation, received the lowest percentage score of around 84%, so it is recommended that improvements be made in these areas. Revisions were made with reference to the validator's suggestions to strengthen the accuracy of the content and clarify the structure of the information presentation. The results of the improvements showed a significant increase in the quality of the material,

especially in terms of the composition and the ability of the LKPD to stimulate students' curiosity more optimally.

Validation by learning media experts was conducted to assess the visual design of the PBL-based LKPD that had been developed. This assessment covered several important aspects, including cover design, page content design, font size selection, use of images and illustrations, and overall readability. The purpose of this validation is to ensure that the appearance of the LKPD supports student understanding and is appropriate for the characteristics of elementary school students. The results of the validation of the two revision stages are presented in **Table 2**.

Table 2. Results of Media Expert Assessment

No	Indicator	Stage 1	Stage 2
1	LKPD cover design	10	13
2	LKPD content design	7	9
3	Appropriate use of text, images, and illustrations	17	21
Total		34	43

Source.: Research 2025

The data in **Table 2** show that the validation results for the first revision achieved a feasibility score of 68% and were categorized as sufficiently valid. Several improvements were suggested by the validators, including the use of a more proportional font size to make it easier for students to read, the addition of visual cues such as arrows, and the provision of clear explanations for the images. Based on this feedback, comprehensive improvements were made to the LKPD's appearance and visual structure. The results of the second revision showed a significant improvement with a feasibility percentage of 86%, which is categorized as highly valid. All indicators assessed showed improvement, indicating that the LKPD has met the design feasibility criteria and is suitable for testing in the learning process.

Validation by language experts was conducted to assess the linguistic aspects of the PBL-based LKPD that had been developed. The assessment covers a number of indicators such as clarity of delivery, level of communicativeness, interactivity, suitability for the cognitive development stage of students, and compliance with the rules of good and correct Indonesian language. The purpose of this validation is to ensure that the language used in the LKPD can be easily understood by students and supports the achievement of learning objectives. The results of the linguistic validation are presented in **Table 3**.

Table 3. Results of Linguistic Expert Assessment

No	Indicator	Score
1	Straightforwardness	14
2	Communicative	5
3	Dialogic and interactive	5
4	Suitability for student development	9
5	Conformity with language rules	9
Total		42

Source: Research 2025

The data in **Table 3** shows that the LKPD is declared highly valid with a validity percentage of 93.33%. This result indicates that, in general, the language used is appropriate for the needs of elementary school students. However, the validators provided feedback on the importance of maintaining consistency in

sentence structure and adjusting the level of questions to make them easier for students to understand. Revisions were made taking these suggestions into account, particularly in simplifying questions, avoiding long sentences, and ensuring the use of terms appropriate to the cognitive abilities of 8–9-year-olds. These revisions are expected to improve the linguistic quality of the LKPD so that it can truly optimize active and meaningful learning processes.

Implementation Stage

The implementation stage in the ADDIE development model was carried out to test the practicality of the PBL-based LKPD product on the “I Obey the Rules (*Aku Patuh Aturan*)” material in third grade elementary school. Implementation is a stage for applying teaching materials in real learning situations to observe student responses, evaluate the effectiveness of instructional procedures, and assess the achievement of learning objectives. The implementation activities were carried out in two stages, namely a small group trial and a field trial, each of which was designed to assess the feasibility and applicability of the LKPD in stages before being implemented widely. The small group trial involved nine third-grade students from class III-A who were divided into three groups. Each group participated in learning using PBL-based LKPD systematically, starting from problem orientation to reflection.

The LKPD procedure was presented in full to ensure that students understood the flow and tasks of the learning activities. After the activity was completed, students completed a questionnaire assessing the practicality of LKPD. The assessment results showed that PBL-based LKPD was very practical, with an average percentage of 88.61%. This assessment reflects students' interest in the content and design of the LKPD at 86.57%, active involvement in the learning process at 88.10%, and time management effectiveness at 97.22%. Student creativity increased by 89.58%, while the effectiveness of evaluation exercises was 90.28%. These findings reinforce the conclusion that the LKPD developed is very practical and can support the creation of active learning that fosters critical thinking skills.

Field trials were conducted with third-grade students as a follow-up step to confirm the practicality of the product in a real learning environment. The questionnaire results indicated that the practicality of the LKPD averaged 90.45% and was categorized as very practical. Student responses to the attractiveness of the LKPD were at 89.39%, while the use of the LKPD in supporting critical thinking reached 90.42%. The time management aspect received a high score of 94.32%, indicating that the LKPD improved learning time efficiency. Student creativity increased by 91.76%, and the quality of the evaluation exercises was rated as very good with a percentage of 90.34%. Findings from field trials show that PBL-based LKPD is able to create a participatory, structured learning atmosphere and foster student independence in learning. Therefore, this LKPD is declared suitable for use as an alternative contextual teaching material in Civic Education learning for elementary school students.

The assessment of the practicality of teaching materials was also derived from responses from third-grade teachers, who were directly involved in the implementation of the learning. Trials were conducted to evaluate the extent to which PBL-based LKPD on the material “I Obey the Rules (*Aku Patuh Aturan*)” was considered appropriate, relevant, and useful in the teaching and learning process. Teachers assessed several important aspects, including the suitability of the teaching material title to the learning material, the clarity of learning outcomes and objectives, and the support provided by LKPD in stimulating students to think critically and logically. The assessment results showed that all indicators were rated very positively and consistently with the instructional function of LKPD as a structured and contextual means of independent learning, as presented in **Table 4**.

Table 4. Results of Educators' Response

Assessment aspects	Score
The title of the teaching material is in accordance with the learning material	4
Learning outcomes and learning objectives are in accordance with the learning theme	4
Learning instructions make it easier for students to understand the learning objectives	4
Supporting information stimulates students to think critically and logically	3
The question encourages students to give imaginative answers.	4
Questions that require students to carry out activities or observations first to obtain the answer	4
Total score	23

Source: Research 2025

The results of teachers' assessments of the practicality of the Student Worksheet (LKPD) are presented in Table 4. Based on the data obtained, the practicality percentage was 95.83%, categorized as very practical. This indicates that, both substantively and technically, the PBL-based Student Worksheet has met the practicality criteria required in PPKn learning. Teachers stated that the Student Worksheet facilitated students' understanding of learning objectives, provided critical-thinking stimuli, and encouraged students to provide argumentative responses. As presented in **Table 4**, all indicators were assessed very positively and consistently with the instructional function of the Student Worksheet as a structured and contextual independent learning tool.

Evaluation Stage

The evaluation at this stage aims to assess the effectiveness of the PBL-based LKPD product by collecting pretest and posttest data on the critical thinking skills of third-grade students at SDN 101912 Pagar Merbau. Multiple-choice tests were administered before and after the learning process to assess improvements in students' critical thinking skills. The learning stages included administering a pretest, delivering the material "I Obey the Rules (*Aku Patuh Aturan*)" using PBL-based LKPD, and closing with a posttest. The distribution of pretest scores showed that the lowest score, 47, was achieved by two students, whereas the highest score, 80, was achieved by one student. These results indicate that the majority of students were in the low category of critical thinking ability prior to the product intervention. Meanwhile, the distribution of posttest scores showed that 81.8% of students obtained scores between 80 and 100, with the highest score reaching 100.

This improvement reflects the effectiveness of using PBL-based LKPD in supporting the development of critical thinking skills. This finding is also demonstrated by changes in critical thinking skill categories, where before the intervention, most students were classified as "Less Critical," while after the intervention, the majority of students were in the 'Critical' and "Very Critical" categories. Quantitatively, there was a shift in critical thinking skill categories from the pretest to the posttest. A total of 18 students were declared proficient (7 highly critical and 11 critical) at the posttest stage, while at the pretest stage, only one student was classified as proficient. This condition shows a significant increase in mastery and illustrates the success of the intervention through the use of PBL-based LKPD. The analysis was conducted based on the students' answers to each question item related to the five critical thinking indicators.

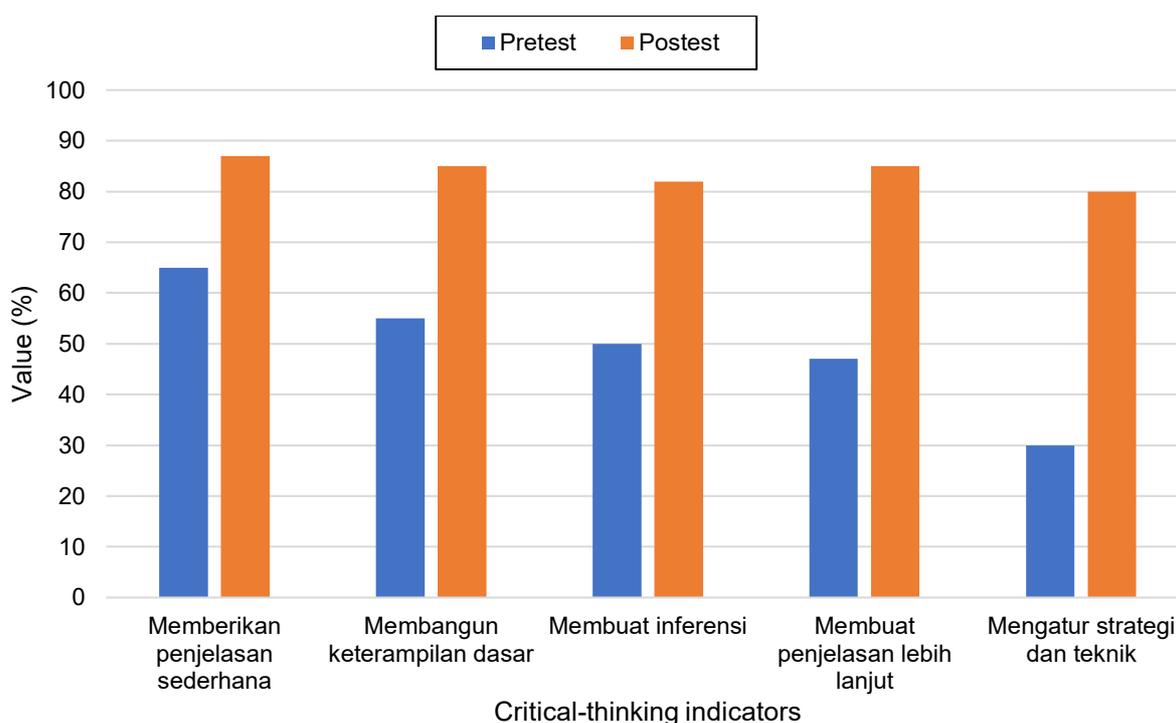


Figure 2. Interpretation of the Achievement of Each Critical Thinking Indicator
Source: Research 2025

All indicators showed improvement from the pretest to the posttest. The greatest improvement occurred in the indicator “providing further explanation” with a difference of 38%, from 47% in the pretest to 85% in the posttest, as shown in **Figure 2**. The indicators “building basic skills” and “organizing strategies and techniques” showed an average improvement of 30%. This indicates that the product developed is not only valid and practical, but also effective in developing students' critical thinking skills. The active involvement of students during the learning process and the clarity of the content in the LKPD encouraged the achievement of critical thinking skill indicators as a whole.

Discussion

The feasibility of PBL-based Civic Education LKPD developed in this study showed excellent results with a “**highly valid**” rating based on assessments by subject matter experts, media experts, and language experts. This high validity indicates that the content structure, visual appearance, and use of language in the LKPD have met the standards for teaching materials. This finding is reinforced by previous studies, which confirm that the development of teaching materials must consider the suitability of the material, the integration of the design, and the ease of understanding for students as the main indicators in assessing the feasibility of learning products (Hidayat *et al.*, 2024; Pratomo & Putri, 2023). Content validity is key to producing relevant and contextual learning media for elementary school students (Zakiah, 2021). Other studies also state that suitable learning media will help accelerate comprehensive understanding of concepts (Gustina & Jayadinata, 2023; Shefira *et al.*, 2024). The aspects of suitability with learning outcomes and communicative language structure play a significant role in the effectiveness of teaching materials (Sarbaini *et al.*, 2023). Suitability is influenced by the integration of the learning approach with students' needs and characteristics, particularly at the elementary school level.

The practicality of PBL-based Civic Education worksheets is demonstrated by positive responses from teachers and students in both small group tests and field tests, with the practicality percentage reaching the “**very practical**” category. These results indicate that the worksheets are easy to use, comprehensible,

and facilitate active student involvement in the learning process. The practicality of learning media is greatly influenced by the efficiency of instructional design and ease of classroom implementation (Atizah *et al.*, 2024). The assessment of practicality also reflects the suitability of the teaching material content to the learning context and the time available at school (Suratman *et al.*, 2021). When teachers and students can use the media independently without intensive assistance, then the media can be categorized as practical (Saputri & Reinita, 2024). Practicality is closely related to students' perceptions of the ease and comfort of learning using the developed LKPD.

The effectiveness of PBL-based LKPD has been demonstrated by an increase in students' critical thinking skills following its use in instruction. This finding is in line with research results showing that LKPD designed with a problem-based approach is able to stimulate students to develop a deep understanding of concepts through reflective activities and contextual problem solving (Khakim *et al.*, 2022). The effectiveness of using LKPD is reinforced by other studies that emphasize that problem-based learning significantly improves students' conceptual understanding and learning motivation, especially in materials related to Pancasila values (Ahmad & Hidayat, 2020). The learning media used in LKPD also contribute to the success of the learning process, as they are able to display visual illustrations that help students understand abstract material more concretely (Meha *et al.*, 2025; Saputri & Reinita, 2024).

Support for the study's results is evidenced by increases in students' posttest scores, indicating that the majority of students have achieved the critical and highly critical thinking categories following instruction. The majority of students demonstrated critical thinking, characterized by the ability to analyze problems, propose logical explanations, and develop relevant solutions grounded in evidence. The group that fell into the highly critical category demonstrated the ability to evaluate various alternative answers, critique basic assumptions, and draw conclusions with structured arguments. These behavioral characteristics are consistent with critical thinking indicators, which include interpretation, analysis, inference, evaluation, and explanation (Amelia & Hamidaturrohmah, 2025; Sabarudin *et al.*, 2023). This statement indicates that the application of PBL-based LKPD has stimulated higher-order cognitive processes, consistent with the critical thinking theory framework employed. The evidence indicates that PBL-based LKPD is effective in improving the critical thinking skills of third-grade students on the material "I Obey the Rules (*Aku Patuh Aturan*)".

CONCLUSION

This study shows that the development of Student Worksheets (LKPD) for Pancasila Education based on PBL on the material "I Obey the Rules (*Aku Patuh Aturan*)" for third grade students at SDN 101912 Pagar Merbau has met the criteria for feasibility, practicality, and effectiveness. Expert validation indicates that the LKPD is highly valid with respect to its material, media, and language. Limited implementation through small-group and field trials indicates that the product is highly practical, as evidenced by student and teacher responses. The product's effectiveness is also evidenced by a significant increase in students' critical thinking skills, as indicated by pretest and posttest results and by the classification of students as achieving or mastering critical thinking indicators. Therefore, this LKPD is declared suitable for use in thematic Pancasila Education learning in elementary schools. Further research is recommended to develop similar teaching materials that incorporate different grade levels and learning models, thereby expanding the product's scope of application and usefulness.

AUTHOR'S NOTE

The author declares that there are no conflicts of interest related to the publication of this article. The author confirms that the article's data and content are free of plagiarism.

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