DEVELOPING A PROBLEM-BASED LEARNING BASED LKPD TO IMPROVE THE READING COMPREHENSION SKILLS

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ABSTRACT
This study was motivated by the low reading comprehension skills of elementary school students, which require innovative learning strategies to improve student engagement and understanding. The objective of this study was to develop a Problem-Based Learning (PBL)-based Student Worksheet (LKPD) and examine its feasibility and its potential to improve the reading comprehension skills of fourth-grade students. This study employed a Research and Development (R&D) method using a simplified Borg and Gall model. The participants were fourth-grade students of SDN Sukapura 3. Data were collected through observation, interviews, questionnaires, and reading comprehension tests, while data analysis was conducted using validation percentage analysis and N-Gain analysis. The results indicated that the developed PBL-based LKPD was categorized as highly feasible, with validation scores of 94.4% from media experts, 91.6% from language experts, and 100% from material experts. The implementation of the LKPD was also associated with an increase in students' average reading comprehension scores from 63.6 in the pre-test to 86.8 in the post-test, with an N-Gain score of 0.632, which falls into the moderate category. These findings suggest that the PBL-based LKPD has the potential to improve students' reading comprehension skills and can serve as an innovative teaching material in elementary schools. However, since this study used a one-group pretest-

posttest design without a control group, the findings should be interpreted cautiously.
***Keywords**: Elementary Education, Problem-Based Learning, Reading Comprehension, Student Worksheet*

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INTRODUCTION

Reading comprehension is one of the fundamental skills that is essential for elementary school students, as it plays a crucial role in acquiring and developing knowledge. Reading comprehension is not merely the ability to recognize words, but it involves complex cognitive processes, such as understanding, interpreting, and evaluating both explicit and implicit meanings within a text (Sarika et al., 2024). In this process, readers are required to connect the information in the text with their prior knowledge to construct meaningful understanding (Tiyustina, 2020). Therefore, reading comprehension serves as a fundamental foundation in supporting students' learning success across various subjects.

However, conditions in the field indicate that students' reading comprehension skills are still relatively low. Based on documentation studies conducted in the fourth grade of SDN Sukapura 3, most students have not yet achieved the expected average score. This finding is supported by interview results with the teacher, which reveal that students experience difficulties in identifying main ideas, understanding the content of texts, and expressing information in their own words. This condition is caused by learning processes that are still teacher-centered and do not actively engage students in understanding texts. Conventional learning methods tend to make students passive and less trained in critical thinking, which ultimately affects their reading comprehension skills (Fauzi, 2020). Therefore, an appropriate learning approach is needed to address this issue.

Efforts to improve reading comprehension skills require learning approaches that actively involve students. One of the models that can be applied is Problem-Based Learning (PBL), which is oriented toward solving contextual problems as a trigger for the learning process. In its implementation, students are encouraged to seek information, analyze, and find solutions independently or collaboratively (Iryanto, 2021). In addition, PBL emphasizes authentic inquiry processes that enable students to build deeper understanding (Narsa, 2021). Thus, PBL is considered capable of increasing student engagement while also enhancing meaningful reading comprehension skills.

In addition to learning models, the use of appropriate teaching materials is also an important factor in supporting the learning process. Student Worksheets (LKPD) are one of the teaching materials that can facilitate structured and independent learning activities. LKPD are designed in the form of systematic activities that encourage students to actively engage in understanding the learning material. In the context of reading, LKPD can assist students in identifying important information, determining main ideas, and comprehending texts more deeply. However, in reality, most LKPD used in schools are still conventional and have not optimally developed students' reading comprehension skills. The available LKPD tend to consist only of practice questions without providing opportunities for students to think critically and understand texts in depth (Ropang et al., 2025).

From a theoretical perspective, reading comprehension is closely related to constructivist learning theory, which emphasizes that learners actively construct knowledge through interaction with texts and prior experiences. This process involves higher-order thinking skills, such as analyzing, synthesizing, and evaluating information, enabling students to develop deeper and more meaningful understanding during the learning process.

Based on these findings, there is a gap between the ideal conditions and the actual implementation in reading comprehension learning. The LKPD used have not been based on Problem-Based Learning and are not specifically designed to improve students' reading comprehension skills. Previous studies indicate that the integration of LKPD and Problem-Based Learning (PBL) in reading

comprehension instruction is still limited. Most studies focus either on the application of PBL or on the development of LKPD separately, with few integrating both specifically to improve elementary students' reading comprehension skills. Therefore, this study aims to fill this gap by developing an integrated and contextual PBL-based LKPD.

Based on the above explanation, the research problems of this study include how to develop a Problem-Based Learning (PBL)-based LKPD to improve students' reading comprehension skills, how feasible the developed LKPD is, and whether the PBL-based LKPD is effective in improving students' reading comprehension skills. Accordingly, the objectives of this study are to develop a PBL-based LKPD, to determine its feasibility, and to analyze its effectiveness in improving students' reading comprehension skills. The hypothesis of this study is that the use of PBL-based LKPD can improve elementary school students' reading comprehension skills.

METHOD

This study employed a Research and Development (R&D) approach aimed at developing a Problem-Based Learning (PBL)-based Student Worksheet (LKPD) and examining its feasibility, practicality, and potential contribution to improving students' reading comprehension skills (Sugiyono, 2019). The development model used in this study was adapted from the Borg and Gall model, which originally consists of ten stages (Borg et al., 1984). However, following Sukmadinata, (2011), this study was limited to seven stages: research and information collecting, planning, product development, initial field testing, product revision, main field testing, and final product revision. The reduction of stages was carried out to adjust the research scope, time limitations, and practical considerations while still maintaining the essential procedures of product development and evaluation.

The participants of this study were 25 fourth-grade students of SDN Sukapura 3. The field testing was conducted in two stages. The initial field testing involved a limited number of students to evaluate the clarity, readability, and implementation of the LKPD, while the main field testing involved all participants to examine the potential contribution of the developed LKPD to students' reading

comprehension skills. The study employed a one-group pretest-posttest design to compare students' reading comprehension scores before and after the implementation of the LKPD. However, since the study did not involve a control group and was conducted with a relatively small sample, the findings should be interpreted cautiously.

The data sources in this study were obtained from students, teachers, and expert validators consisting of media, material, and language experts. Data collection techniques included observation, interviews, questionnaires, and tests. Observation and interviews were conducted to collect preliminary information regarding classroom conditions, students' learning difficulties, and instructional needs. Questionnaires were used to assess the feasibility and practicality of the LKPD based on expert judgments and students' responses.

The research instruments consisted of expert validation sheets, student response questionnaires, and reading comprehension tests. The validation sheets assessed aspects such as content suitability, language, presentation, and design. Meanwhile, the reading comprehension test was developed based on several indicators, including identifying main ideas, understanding text content, interpreting information, and drawing conclusions.

To support content validity, the test instruments were reviewed by material and language experts before implementation. In addition, revisions were made based on expert suggestions to improve the clarity and appropriateness of the test items. The reliability of the test instruments was examined through a limited trial to ensure the consistency of the items before their use in the main field testing.

Data analysis was conducted using descriptive quantitative techniques. Data obtained from expert validation sheets and questionnaires were analyzed using percentage calculations to determine the feasibility and practicality categories of the developed LKPD. Meanwhile, students' pretest and posttest scores were analyzed using the N-Gain formula to measure the improvement in reading comprehension skills after the implementation of the LKPD. The results of the analysis were then interpreted descriptively to examine the potential effectiveness of the developed product.

RESULTS AND DISCUSSION

RESULT

The development of the Problem-Based Learning (PBL)-based LKPD was conducted through seven stages, namely needs analysis, planning, initial product development, expert validation, revision, limited trial, and final revision followed by large-scale implementation. The needs analysis revealed that students' reading comprehension skills were relatively low and that existing teaching materials did not sufficiently support critical thinking activities. Based on these findings, the LKPD was designed by integrating five reading texts and PBL-based learning activities aligned with the stages of problem orientation, investigation, and reflection.

The feasibility of the developed LKPD was evaluated through expert validation involving media, language, and material experts. The results showed validation scores of 94.4% from media experts, 91.6% from language experts, and 100% from material experts, with an overall average of 95.3%. Based on commonly used percentage criteria in educational evaluation, these results indicate that the LKPD can be categorized as highly feasible, suggesting that it meets the standards of design, language, and content suitability.

The practicality of the LKPD was measured through student responses involving 25 students. The results indicated an average score of 88.5%, with the highest score in the attractiveness aspect (90.1%), followed by implementation (88.5%) and clarity (87.2%). Referring to established practicality criteria, these findings suggest that the LKPD is practically applicable and well-received by students, particularly in terms of engagement and ease of use.

The effectiveness of the LKPD was examined using pretest and posttest results. The findings showed that the average score increased from 63.6 in the pretest to 86.8 in the posttest, with an N-Gain score of 0.632, which falls into the moderate category. This result indicates a moderate level of improvement in students' reading comprehension skills following the implementation of the LKPD. However, since no statistical significance testing or control group comparison was employed, these findings should be interpreted as indicative rather than conclusive evidence of effectiveness.

DISCUSSION

The findings of this study indicate that the systematic development of PBL-based LKPD contributes to the creation of structured and meaningful learning materials (Narsa, 2021). The seven-stage development process ensures that the product is designed based on students' needs and refined through validation and trials, resulting in a well-developed learning resource. The integration of PBL stages encourages students to actively engage in problem-solving activities, which aligns with constructivist learning theory emphasizing knowledge construction through experience.

The high feasibility results suggest that the LKPD meets important criteria of effective teaching materials. The average validation score of 95.3% indicates that the LKPD is well-designed in terms of content, language, and presentation Pradita et al., (2019). Similarly, the practicality results indicate that the LKPD is easy to use and engaging for students. These findings are consistent with previous studies showing that student-centered learning materials can enhance student participation and motivation (Fauzi, 2020). However, these results primarily reflect perceptions of quality and usability, and may not fully capture the actual impact on learning outcomes.

In terms of effectiveness, the N-Gain score of 0.632 indicates a moderate improvement in students' reading comprehension skills. This improvement may be associated with the use of PBL-based activities that encourage active engagement and deeper understanding of texts. Nevertheless, alternative explanations should also be considered. The observed improvement may partly be influenced by testing effects, where students perform better in the posttest due to familiarity with the test format. In addition, external factors such as teacher support, classroom interaction, and students' prior experiences may also contribute to the increase in scores.

Furthermore, the research design used in this study presents several limitations. The use of a one-group pretest-posttest design without a control group limits the ability to attribute the observed improvement solely to the implementation of the PBL-based LKPD. In addition, the relatively small sample size and the short duration of implementation may affect the generalizability and stability of the

findings. These limitations indicate that the results should be interpreted with caution.

Despite these limitations, the findings suggest that PBL-based LKPD has the potential to support student-centered learning and may contribute to improving students' reading comprehension skills. Future studies are recommended to employ more rigorous experimental designs, include control groups, involve larger samples, and extend the duration of implementation to provide stronger empirical evidence regarding the effectiveness of the developed LKPD.

The following is a display of the LKPD based on Problem Based Learning (PBL) that was developed:

<table>
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<tr>
<td>Stage 1 problem orientation Stage</td>
<td>Stage 2 learning organization</td>
<td>Stage 3 Explanatory Text</td>
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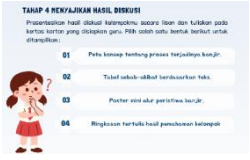
<td> 
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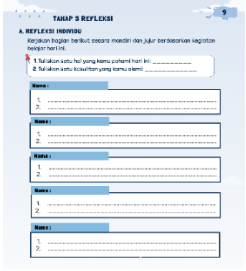
<td> 
</td>
</tr>
<tr>
<td>Stage 3 investigation</td>
<td>Stage 4 presentation of results</td>
<td>Stage 5 reflection</td>
</tr>
</table>

Figure 1. Stages of PBL-Based LKPD

CONCLUSION

The development of a Problem-Based Learning (PBL)-based Student Worksheet (LKPD) in this study resulted in a learning material that is categorized as highly feasible and practical, with validation scores of 95.3% and practicality of 88.5%. The implementation of the LKPD was also associated with a moderate improvement in students' reading comprehension skills, as indicated by an N-Gain score of 0.632. These findings suggest that the integration of PBL within LKPD has the potential to support active learning and the development of students' higher-order thinking skills.

From a theoretical perspective, this study supports constructivist learning theory by indicating that learning activities involving problem-solving and active engagement may facilitate knowledge construction. In terms of scientific contribution, this study provides empirical support for the use of a systematic R&D approach, particularly the Borg and Gall model, in developing contextual teaching materials for elementary education.

Practically, the developed LKPD may serve as an alternative instructional material to support student-centered learning in elementary schools. However, these findings should be interpreted cautiously due to several methodological limitations, including the use of a one-group pretest-posttest design without a control group, the relatively small sample size, and the short duration of implementation. These limitations restrict the ability to attribute the observed improvement solely to the intervention and may affect the generalizability of the results.

Therefore, future research is recommended to employ more rigorous experimental designs, such as quasi-experimental or true experimental studies involving control groups, as well as longitudinal approaches to examine the long-term impact of PBL-based LKPD. In addition, studies involving larger and more diverse samples are needed to strengthen the generalizability of the findings.

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