



Development of IPAS worksheet based on project-based learning to improve the social skills of third grade elementary school students

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ARTICLE INFORMATION

History:
Received 26 July 2025
Revised 18 August 2025
Published 26 September 2025

Keywords:

Student Worksheet, Project-Based Learning, Social Skills, Elementary School



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ABSTRACT

The existence of LKPD as supplementary teaching materials must be considered in terms of relevance and suitability to field needs. Selecting LKPD, supported by an appropriate learning approach, can positively impact learning, particularly by improving students' social skills. The development of PjBL-based LKPD aims to produce teaching materials that are relevant and suitable to the needs of third-grade elementary school students. The development of PjBL-based LKPD was carried out using Branch's ADDIE model, which consists of five research stages: analysis, design, development, implementation, and evaluation. However, in this study, the researcher only conducted a feasibility test of the LKPD by experts and students. Based on the feasibility test, the PjBL-based LKPD was found to be highly suitable for use in third-grade elementary school science education. The data collection techniques used were interviews and questionnaire completion, with quantitative descriptive analysis. This study still needs to be developed further in terms of effectiveness testing and improving students' social skills, thereby generating diverse findings for the field of education.

How to cite: Wulandari, Y., Hidayat, O. S., & Lestari, I. (2025). Development of IPAS worksheet based on project-based learning to improve the social skills of third grade elementary school students. *Jurnal Pemikiran dan Pengembangan Sekolah Dasar (JP2SD)*, 13(2). Doi: <https://doi.org/10.22219/jp2sd.v13i2.41809>

INTRODUCTION

Social skills are closely related to students' interactions with the surrounding community. Social skills are the ability to communicate and interact with others in daily life (Ariyanto et al., 2023). Social skills include interacting with others, establishing communication, showing respect, understanding other people's points of view, accepting and giving feedback, and acting in accordance with ethics and regulations. This ability is manifested through verbal and non-verbal communication, including conversation, gestures, body language, and facial expressions (Barokah et al., 2024).



Students with strong social skills can preserve culture for future generations and adapt to social environments.

Students need to be trained in social skills from an early age. Social skills can be taught either through formal or informal learning (Nada et al., 2024). The development of social skills in formal learning can be applied through the integration of subjects contained in certain educational unit levels. At the elementary level, social skills can be integrated into the Natural and Social Sciences (IPAS) subject. Social studies learning not only functions to improve students' cognitive skills, but also develops other skills. Skills considered in science subjects include social skills and social care (Parni et al., 2020). Preliminary studies found that the implementation of science learning in elementary schools has so far focused more on cognitive aspects. However, for students to become citizens and part of the global community, they need to possess strong social skills. Thus, the IPAS learning approach needs to be strengthened not only to hone thinking skills but also to build social skills, producing a generation with integrity and character amid globalisation.

Social studies learning aimed at building social skills can be designed using various approaches, such as the project-first educational model called Project-Based Learning (PBL). PjBL is a teaching method that uses projects or important facilities in the process. The PjBL method plays a significant role in improving skills and shaping students' character, as it allows them to learn from their experiences and combine the main competencies from each subject (Kemendikbudristek, 2022). Learning planning with the PjBL model also fosters student interaction through direct involvement in project activities, thereby increasing social development, as supported by teachers' creativity in designing enjoyable activities (Nahdiyah & Laili, 2024). His findings indicate that teaching and learning practices using the PjBL model can develop problem-solving skills, teamwork, communication, critical thinking, and personal growth (increased confidence, sense of responsibility, and enhanced social skills) through interaction with other students (Novitasari, 2023). That way, the PjBL learning approach not only focuses on developing cognitive abilities but also on developing attitudes and skills to achieve maximum learning outcomes across all aspects.

The PjBL learning approach applied during the teaching and learning process can be realized through teaching materials, including Student Worksheets (LKPD). LKPD is a learning media in print form that includes concise materials and task guides for students to complete (Sutrisno, 2021). Using LKPD in learning offers many benefits. The role of LKPD includes creating conditions that stimulate students' enthusiasm for development, assisting them in critical thinking and taking an active role in conflict resolution, increasing their confidence in completing tasks, and fostering character in every action (Angraeni et al., 2020). Based on the results of several studies, the application of LKPD in teaching and learning activities contributes to improving student learning outcomes (Agustina et al., 2019; Khairunnisa et al., 2019; Mursalim & Rumbarak, 2021), problem-solving skills (Amirin & Suparman, 2019), and independence (Khairunnisa et al., 2019). The application of LKPD can also hone students' critical thinking skills (W.P. Putra et al., 2023). In addition, LKPD can improve students' social skills (Wulandari et al., 2022). The advantages of using LKPD in learning are a special consideration for educators in using LKPD as relevant learning materials.

Based on observations at schools, several problems were identified in the IPAS learning process in the classroom. First, package the primary teaching materials into a

limited number of books so that no student has to hold a single book while studying. To get around this, the leading textbooks are left at school to avoid the risk of books being reduced due to being left behind or even lost. This condition leads students to ask for material to be summarized so it can be studied at home, and to study materials during exam week. Second, LKPD has occasionally been used by teachers in the learning process. Usually, the LKPD used is the one available in the Canva application so that teachers can download the file for free through their Belajar account.ID account. Because the LKPD used is in the form of sheets, the risk of the LKPD that has been done is easily lost. The LKPD still focuses on cognitive development, so the content includes teaching materials and evaluations in multiple-choice or descriptive question formats. Third, some students still need exceptional guidance to understand IPAS material better.

The obstacles are varied, such as students who are not fluent readers and a lack of literacy in the classroom, so the ability to understand Reading still needs improvement. Fourth, the assessment is still focused on the cognitive realm, so the attitude aspect still needs to be reconsidered. The creation of a daily journal on students' attitudes is also rarely done. Fifth, the application of the PjBL model in science lessons still has challenges. The implementation of PjBL focuses on the Pancasila Student Profile Strengthening Project (P5) program, so that, in intracurricular activities, the PjBL model has not been widely adopted. The application of the PjBL model also requires more tools and materials, so it is feared that it can burden students if it is done too often. The results of the study show that there are obstacles in the implementation of the PjBL model, such as limited resources, facilities, and limited implementation time (Negari et al., 2024), inefficient time management, educators and students who do not have an understanding of the concept of PjBL, and a lack of motivation of teachers and students (Syahlan et al., 2023).

Based on field findings, alternative solutions to these problems include developing LKPD based on PjBL. The LKPD products to be developed have novelty in the cultivation of students' social skills. Social skills can be applied at the elementary level, including interaction skills, communication skills, group participation, emotion management skills, and social cognition (Jurevičienė et al., 2018). By developing social skills, students will be able to adjust to their environment. According to research (Qitfirul & Izza, 2023), students' social skills are still relatively low. Not much different from previous research, based on the results of the preliminary study, the aspects of social skills that must be developed and improved by grade III students include lining up in an orderly manner, being responsible for the tasks given by the teacher and being able to complete on time, respecting other people who speak, and developing courage in expressing their opinions. Thus, it is necessary to develop a PjBL-based LKPD to strengthen students' social skills. This LKPD is designed to be an innovative and beneficial product, especially in the teaching and learning process of IPAS for grade III students.

METHOD

This study uses the Research and Development (R&D) approach, with the ADDIE model, to produce teaching materials in the form of LKPD with PjBL bases that are suitable for learning. So that the ADDIE stages carried out are limited to the development stage. The subjects of this study are 34 students in grade III. Data collection techniques include interviews, observations, and questionnaire administration. Feasibility is measured based on the results of product validity tests

conducted by media experts, material experts, and linguists. In addition, there is a user test consisting of a one-to-one. The calculation of user test processing uses the following formula:

$$P = \frac{\sum x}{\sum i} \times 100$$

Information :

P = total score

$\sum x$ = the total number of respondents' answers across the item

$\sum i$ = total total ideal score in per-item

Furthermore, the results will be categorized as shown in the Table 1

Table 1. Eligibility Criteria

Interval Percentage	Criteria
82% < x < 100 %	Very feasible
63 % < x < 81 %	Feasible
44 % < x < 62 %	Less feasible
25 % < x < 43 %	Not feasible

RESULT AND DISCUSSION

Result

The process of developing PjBL-based LKPD uses the ADDIE stages with the following explanation:

1. Analysis

By completing the questionnaire, some information was obtained about the science learning process in grade III. First, based on the results of the questionnaire analysis of the needs of the social skills score of students of 53.08, who are in the category of medium social skill level. Judging from the filling out of the questionnaire, it was identified that 19 questionnaires filled out by students seven indicators of social skills were still categorized as low, including that there were still many students who disturbed friends during learning in class, students were not able to complete assignments on time, students did not have the initiative to divide tasks among each member of their group, Students still do not show active role in the group without the direction of other group members, students still do not show respect for friends who are speaking in front of the class, students have not shown an attitude of initiative in explaining the results of their work, and students are not able to complete individual tasks without the help of friends. Second, observations indicate that science learning in schools often occurs in a theoretical manner and lacks active, meaningful exploration

By focusing on the knowledge aspect of social studies learning, it is evident that the attitude and skill aspects are not objectively assessed. However, for learners to become citizens and part of the global community, they need to possess well-developed social skills. Third, the selection of LKPD as a teaching material to support the improvement of social skills is based on the results of a questionnaire analyzing students' learning needs. As many as 84.2% chose LKPD as supporting teaching materials in the learning process. The selection is based on the fact that LKPD is considered a teaching material that students can easily understand. Fourth, the project-based learning approach is also the most preferred among students, with a questionnaire score of 63.2% among the many learning approaches used by teachers in the classroom, because students find it exciting and fun, and it can be done in groups. The learning approach students disliked most was problem-based learning, with 63.2% of students reporting this, because they found the model difficult to understand.

2. Design

The PjBL-based LKPD design was created using the Canva application. Later, the PjBL-based LKPD will be printed as a book for use in the science learning process in grade III of elementary school.

3. Development

In the development stage, the researcher implemented the previous PjBL-based LKPD design and conducted validation assessments with experts and one-to-one tests. The results of expert validation on PjBL-based LKPD products are:

a. Media Expert

Table 2. Media Expert Validation Results

Aspect	Percentage
LKPD size	87,5%
Design the cover of LKPD	86,3%
Design content of LKPD	90,2%
Avarage	88% (Very feasible)

b. Material Expert

Table 3. Content Expert Validation Result

Aspect	Percentage
Suitability of the material with the Learning Outcomes and Objectives	100%
Material accuracy	83,3%
Presentation of learning	91,6%
Learning process	100%
Avarage	93,7% (Very feasible)

c. One-to-One

Table 4. One-to-One Trial

Aspect	Persentase			
	1	2	3	4
Design	100%	91,6%	91,6%	100%
Language	100%	100%	100%	100%
Content	100%	75%	100%	100%
Producer advantages	100%	100%	100%	100%
Average	100%	91,65%	97,9%	100%

Based on validation and one-to-one tests, it was concluded that the PjBL-based LKPD was highly feasible for use in science learning in grade III elementary school.

Discussion

The use of LKPD in learning is not new. The history of LKPD use globally can be seen in the 1990-1993 period, focusing on laboratory activity guidelines to clearly illustrate the instructions (VanderZee & Mosher, 1992; Witenoff & Lazarowitz, 1993). The use of LKPD from 1998 to 2008 focused on developing students' cognitive abilities. The LKPD design typically highlights evaluation through descriptions or multiple-choice items (Ballantyne, 1998; Lannie & Martens, 2004; Maharajh et al., 2008; Mortensen & Smart, 2007). LKPD products from 2010 to 2019 also still have a focus on developing students' cognition and begin to lead to specific skills such as scientific literacy skills, creative thinking, and critical thinking skills (Barniol & Zavala, 2016; Ekantini & Wilujeng, 2018; Susantini et al., 2016; Wulansari et al., 2019; Yildirim et al., 2011). Finally, from 2020 to 2024, the development of a massive LKPD is designed based on technology. The development is based on the COVID-19

Pandemic, so the learning process must be carried out remotely and requires an internet connection. The development of technology-based LKPD, in addition to being intended to improve the understanding of teaching materials, is carried out to improve mastery of Information and Communication Technology (ICT), learning independence, and contribute to improving analytical skills and creativity (Bakri et al., 2020; Gainau, 2021; Haking et al., 2020; Mahtari et al., 2020; Ramlah et al., 2023).

Teachers can use LKPD as additional teaching materials. The development of PjBL-based LKPD aims to create engaging teaching materials for use during social studies instruction in grade III of elementary school and to improve students' social skills. Given that LKPD is a teaching material with a long history in education, researchers need to develop LKPD as teaching materials to support learning. The LKPD is designed using the PjBL approach because its application in the school environment remains limited. To achieve this goal, the development of PjBL-based LKPD must first be deemed feasible based on expert and student validation. Expert validation with subject-matter experts was chosen as an idealistic assessment to help the researcher understand the theoretical development of LKPD based on PjBL, and the feasibility assessment of the student subject is intended to provide practical insights into the product to be developed. The results of developing PjBL-based LKPD in class III science subjects have proven very feasible for learning. The LKPD's design is one of the factors considered in its development. The design must be made as attractive as possible to motivate students' enthusiasm for learning. The use of various colours, illustrations, and simple, clear writing is one of the attractions of the development of PjBL-based LKPD. The illustration is simple and not overly complicated, making it easier for students to understand the content of LKPD. Realistic illustrations can help students better imagine the world around them (Sutawijaya, 2025). Illustrations also need to be accompanied by color visuals. Selecting bright colours can stimulate cheerful characters, and understanding the concept of natural colour adaptation, along with real or fictitious object elements around students, can help guide appropriate colour selection. Illustrations also need to be accompanied by explanatory text that explains what happens in the image; the visual writing should be considered for readability. Typography in books should use a typeface with simpler letters, without strokes or decorations that can make the text difficult to read. The results of the study show that the use of LKPD with an attractive visual design can improve student outcomes (Meilani Anjelina et al., 2024; Putu et al., 2025); improve communication process skills (Annisa Damayanti et al., 2024); increase interest in learning (Nura et al., 2025); and mobilize the active participation of students both in understanding concepts and active involvement (Rahmawati & Fadlillah, 2024).

In addition to the design aspect, the development of LKPD also needs to be considered from a material perspective. The use of language in delivering material is one of the important things. The use of language must be adjusted to the language development of grade III elementary school students. The language development of elementary school students consists of: 1) being able to master around 50,000 words to 80,000 words depending on the language obtained from the surrounding environment; and 2) language mastery at elementary school age takes place faster because at this time the development of children's brain functions has developed rapidly so that children will be easier to process language (Dewi et al., 2020). Choosing the correct language will make it easier for students to understand the learning material. The material developed must also address the learning outcomes and objectives set. The determination of

learning outcomes and learning objectives has been stipulated in the Decree of the Head of the Education Standards, Curriculum, and Assessment Agency, Ministry of Education, Culture, Research, and Technology No. 32/H/KR/2024 concerning Learning Outcomes in Early Childhood Education, Basic Education, and Secondary Education Levels in the Independent Curriculum. However, in the flow section, the teacher's learning objectives can determine their respective flow based on the field's needs. The accuracy and presentation of the material also need to be considered in the development of PjBL-based LKPD. The available material must be accurate in concepts, definitions, data, and field facts; be systematically described from easy to difficult; and be complete in terms of LKPD elements.

The learning process using LKPD is designed using the PjBL approach, in which students will create projects, both individually and in groups, to understand the teaching material. Based on previous research conducted by Wulandari et al., LKPD is suitable for use in social studies learning, can improve critical thinking skills in the medium category, and can improve social skills in the very active category (Wulandari et al., 2022). Then, the research conducted by Herlina et al. found that, through PjBL learning, students' critical thinking can increase when they are required to solve problems (Herlina et al., 2022). The same study by Halimah et al. shows that critical thinking skills can be improved through effective learning methods (Halimah et al., 2023). Several previous studies have shown that implementing PjBL-based LKPD improves learning outcomes and social skills. Research by Elfitriyah and Haeruddin (2025; Gani et al., 2023; Huda & Waluyo, 2025; Martatiana et al., 2024; Zusniarni et al., 2024) found that the use of PjBL-based LKPD was able to increase collaboration, critical thinking skills, science literacy, science learning outcomes, and significantly increase the activeness and creativity of students. This shows that the development of LKPD is not only an alternative but also a necessity for creating holistic, character-development-oriented learning, as evidenced by research on the development of PjBL-based LKPD.

CONCLUSION

The development of PjBL-based LKPD aims to produce additional teaching materials needed by students in learning Pancasila Education in grade III elementary school. In addition, the development of PjBL-based LKPD is expected to improve students' social skills. The PjBL-based LKPD developed has proven very feasible for use in the learning process, as evidenced by expert and student assessments. The selection of visual design, the selection of appropriate language, the accuracy of the material and presentation, and the selection of the proper learning process are the basis for the PjBL-based LKPD, which is highly feasible for learning. The development of this product still has limitations only in the feasibility test; it is hoped that the next researcher will be able to measure the effectiveness and improvement of students' social skills and attitudes.

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