Randwick International of Education and Linguistics Science (RIELS) Journal
Vol. 5, No. 3, September 2024 | Page 1155-1163 |
https://www.randwickresearch.com/index.php/rielsj

Student Worksheets Literacy-Based to Improve High-Level Thinking Skill

DOI: *https://doi.org/10.47175/rielsj.v5i3.1071*

| Irawati Br Sembiring[1,*] | Wisman Hadi[2] | Isda Pramuniati[3] |

[1,2,3]Basic Education, Postgraduate program, Universitas Negeri Medan

*Irawatipelawi89@gmail.com

ABSTRACT

This research is motivated by the lack of availability of LKPD that supports literacy activities to improve high-level thinking skills. This type of research is Research and Development (R&D) with the ADDIE model development method. The discussion of the research is adjusted to the ADDIE research and development procedures, namely: analyze, design, development, implementation, and evaluation. The subjects of this study were 24 students of grade V SDN 101867 Payagambar. Determination of the level of feasibility of LKPD or Student worksheets is based on expert validation tests and trials on students through student response questionnaires. The effectiveness of LKPD was obtained from the results of the pretest and posttest of grade V students. The results of this study indicate that the validation of material experts was 80% with a feasible category, validation of language experts was 85.41% with a very feasible category, validation of layout design experts was 90.47% with a very feasible category. The percentage results of the student response questionnaire were 86.70 which were categorized as very feasible, so it can be said that LKPD is feasible for use by grade V elementary school students. The results of the student pretest reached an average score of 69.3 with classical completeness reaching 42% with an incomplete category. While the results of the posttest after using LKPD reached an average of 84.50 with classical completeness reaching 100% and declared complete. Based on the pretest and posttest values, the gainscore value can be seen as 0.51 with a moderate effectiveness category. This shows that the use of literacy-based LKPD to improve high-level thinking skills has been effectively used by grade V students of SDN 101867 Payagambar, Batang Kuis District.

KEYWORDS

Higher Order Thinking Skills; literacy-based LKPD; primary school

INTRODUCTION

Student worksheets are one of the learning resources known in the 2013 curriculum which are used to help teachers train students' skills in finding concepts through work steps or problems provided along with assessment techniques. Teachers are required to be able to carry out learning according to the applicable curriculum. Therefore, learning tools are needed that actively develop students. It has some meanings to help and facilitate teaching and learning activities so that effective interactions are formed between students and educators, and can improve student learning activities and achievements. The reality in the field shows that the its availability that supports literacy activities to improve high-level skills is still lacking. It used in schools, especially at SDN 101867 Payagambar, only contains a list of questions in the form of essays and students are assigned to answer them, there is no literacy process and problem solving so that it has not been able to encourage the growth of critical thinking in students. It also is used by students is still integrated with student books

that require integrated thematic learning and there is no separate of it specifically. That is integrated with the student handbook is mostly limited to discourse and pictures without any instructions, tables, conversations, instructions, newspaper clippings, magazines, books, and others as literacy products.

Based on the author's observations, LKPD used by grade V students of SDN 101867 Payagambar is not entirely literacy-based, and its questions have not made students have high-level thinking skills. In fact, in the 2013 curriculum, teachers are expected to be able to compile HOTS questions so that students not only answer at levels C-1 (knowing), C-2 (understanding), C-3 (applying), but also at levels C-4 (analyzing), C-5 (evaluating), C-6 (creating). In reality, 80% of teachers at SDN 101867 Payagambar have not been able to create questions that make students think at a high level. This is very contrary to the demands of the 2013 curriculum. The existing learning conditions generally only accustom students to be passive in receiving facts, information, and materials from teachers without demanding much thinking. This symptom is seen in the learning styles of most elementary school students. Initiating HOTS Learning in Elementary Schools provides an alternative choice in the learning process to optimize students' potential and abilities. This is supported by the statement of Fajriyah and Agustini (2018) who stated that high-level thinking skills are a priority in producing competent graduates as stated in the Attachment to Permendikbud Number 54 of 2013. Adisa (2019) in her article entitled "Development of Student Activity Sheets Based on Higher Order Thinking Skills on Grade V Elementary School Scale Material" states that "LKPD or work sheets based on Higher Order Thinking Skills can improve student learning outcome tests by obtaining an average score of 84.94". This study develops teaching materials based on higher order thinking skills that can be used by students in developing high-level thinking skills. The developed teaching materials can be used independently by students, thus facilitating the teacher's work in guiding students to develop critical and creative thinking (Husniyatun, 2021; Husna et al., 2023).

The results of a study conducted by Sulistiyorini (2018) entitled "Development of Integrated Thematic Student Worksheets (LKPD) Integrating Strengthening of Character Education and Literacy of Elementary School Students in Semarang City" which stated that LKPD integrated with PPK and literacy on the theme of the Beauty of Togetherness, and the sub-theme of Being Grateful for Togetherness improved student learning outcomes. These findings can be continued by developing literacy-based to improve high-level thinking skills. Its development can strengthen the implementation of the 2013 Curriculum. Therefore, an alternative solution is needed in observing this problem. Learning carried out by incorporating literacy is expected to be able to help improve high-level thinking skills. One of them is by developing literacy-based to improve high-level thinking skills for second semester students of grade V SDN 101867 Payagambar.

RESEARCH METHODS

This type of research is Research and Development. In this study, what was developed was a literacy-based to improve high-level thinking skills. The research was conducted at the Technical Implementation Unit of Formal Education Unit SDN 101867 Payagambar, Batang Kuis District. This research was conducted from May to June 2022. The subjects in this study were 24 students in grade V semester II.

Table 1. Student Data

School	Class	Total Students		Total Overall
		Male	Female	
SDN 101867 Payagambar	V	15	9	24

The object of this study is the development of literacy-based Student Worksheets (LKPD) in semester II to improve students' high-level thinking skills.

The data analysis technique used to analyze the results of its validation is descriptive qualitative, namely by looking its feasibility from the validation results. The instrument used to assess its product is a validation questionnaire sheet consisting of material experts, language experts, and layout design experts. Its feasibility test uses the percentage score of the expert validator questionnaire, namely:

$$\mathbf{P}=\frac{f}{N} \times 100\ \%$$ *(Sudjana, 2007)*

Description:

P : percentage score

f : total score obtained

N : maximum score

According to Sudjana (2007: 91) the determination of validation criteria is determined by the following steps:

a. Determining the percentage of ideal score (maximum score)

b. Determining the percentage of ideal score (minimum score)

c. Determining the range

d. Determining the interval class

e. Determining the length of the interval

Based on the calculation above, the percentage results are adjusted to the feasibility test criteria presented in Table 2 below:

Table 2. Classification of Feasibility of Expert Validation

Achievment Level	Valid Classification	Eligible Classification
84% < P < 100%	Very Valid	Very Eligible
68% < P < 84%	Valid	Eligible
52% < P < 68%	Quite Valid	Quite Eligible
36% < P < 52%	Less Valid	Less Eligible
20% < P < 36%	Not Valid	Not Eligible

Source: Sudjana (2007) and has been adjusted to the objectives of this study.

It can be valid if it reaches a score of more than 68%. Therefore, LKPD is said to be suitable for use by fifth grade students of SDN Payagambar, Batang Kuis District if the average percentage of expert validation scores is more than 68%.

Student Response Questionnaire

The data obtained from the student response questionnaire were analyzed by determining the percentage of students who gave answers with positive response values for each category stated in the questionnaire using the following formula:

$$\mathbf{PRS} = \frac{\sum A}{\sum B} \times \mathbf{100}\%$$

Description:

PRS : Percentage of students who gave positive responses to each category asked

∑A : Proportion of students who chose

∑B : Number of students (respondents)

It can be concluded that LKPD to improve students' high-level thinking skills is said to be valid if it reaches a score of more than 68%. So, LKPD is said to be suitable for use by grade V students of SDN Payagambar, Batang Kuis District if the average percentage of student response questionnaire scores reaches more than 68%.

LKPD Effectiveness Test

To calculate the individual learning completeness of students, namely:

$$\mathbf{KB = T/Tt \times 100\%} \quad \textit{(Trianto, 2013)}$$

Description:
KB : learning completeness
T : total score obtained by students
Tt : total score

To calculate the classical learning completion of students, namely:

$$\mathbf{PKK} = \frac{\textit{students who have completed learning}}{\sum \textit{Students}} \times \mathbf{100\%} \quad \textit{(Zainal Aqib et al., 2010: 41)}$$

According to Trianto (2013) a class is said to have completed learning if 85% of the class has achieved ≥ 70%. If the completion of students in learning individually and classically has been analyzed, then the results of the pretest and posttest are calculated with a gain score to assess the improvement and effectiveness before and after using LKPD in the learning process calculated with the normalized gain score formula:

$$g = \frac{S_{post} - S_{pretest}}{100\% - S_{pretest}} \quad \textit{(Melzer dalam Syahfitri, 2008: 33)}$$

Gain score is a good indicator to show the level of effectiveness of treatment from the post-test score. Gain score categories are grouped as follows:
0.70<gs≤gs1.00 = high
0.30<gs≤0.70 = medium
0.00<gs≤0.30 = low

RESULTS AND DISCUSSION

Based on the average score of the presentation, the developed LKPD has met the demands of learning needs

From the three expert validators who have provided input and provided assessments to the developed LKPD, the following is a comparison diagram of the percentage of each expert validation.

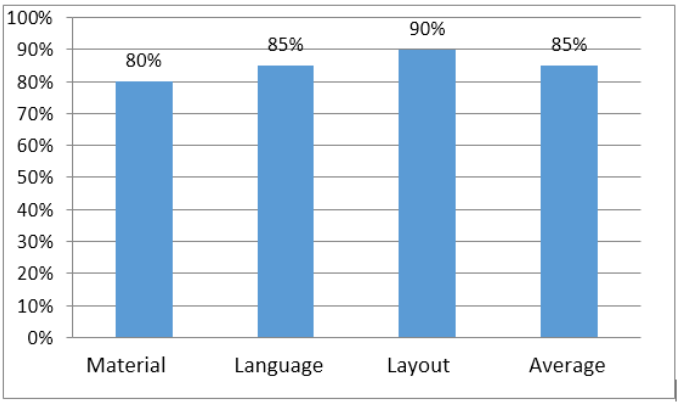

Figure 1. Recapitulation Diagram of Expert Validation Results

Based on the three validators (material, language, layout design), there are differences in assessment. The highest assessment is from the layout design expert with a percentage of 90% and is categorized as **very valid**, while the lowest assessment is from the material expert, namely 80%, which is categorized as valid. The average percentage of the three experts reaches 85% with a very valid and feasible category.

Eligibility of Student Response Questionnaire

In addition to the expert validator assessment, the student response questionnaire was also used to determine the eligibility of the developed LKPD. Therefore, the response questionnaire was given to 24 students of grade V SDN 101867 Payagambar. The results of the student response questionnaire assessment can be seen in table 3 below:

Table 3. Student Response Questionnaire

Numbers of Respondents	Questioner	
	Score	Classification
1	35	Very Eligible
2	35	Very Eligible
3	37	Very Eligible
4	36	Very Eligible
5	37	Very Eligible
6	35	Very Eligible
7	34	Very Eligible
8	33	Eligible
9	32	Eligible
10	34	Very Eligible
11	36	Very Eligible
12	32	Very Eligible
13	35	Eligible
14	35	Very Eligible
15	36	Very Eligible
16	37	Very Eligible
17	36	Very Eligible
18	34	Very Eligible
19	34	Very Eligible
20	33	Eligible
21	32	Eligible
22	33	Eligible
23	35	Very Eligible

24	36	Very Eligible
Percentage Average	**86.7 %**	
Classsification	**Very Eligible**	

Based on the data above, it can be concluded that literacy-based LKPD to improve high-level thinking skills is valid/suitable for use.

Effectiveness of Literacy-Based LKPD to Improve High-Level Thinking Skills

The research instrument used in this study was a student learning outcome test in the form of a pretest and posttest. The pretest was conducted before the trial of the developed product, namely literacy-based to improve high-level thinking skills of 24 fifth-grade students. The posttest was conducted after students used it developed during the learning process.

According to Trianto (2013), a class is said to have completed learning if 85% of the class has achieved ≥ 70. If the completion of students in learning individually and classically has been analyzed, then the results of the pretest and posttest are calculated with a gain score to assess the improvement and effectiveness before and after using it. The learning outcomes of students individually and classically can be seen in table 4 below:

Table 4. Pretest and Posttest Results of Grade V Students

No. Respondent	**Pretest**		***Posttest***	
	Score	**Criteria**	**Score**	**Criteria**
1	68	Not Completed	84	Completed
2	72	Completed	84	Completed
3	80	Completed	100	Completed
4	68	Not Completed	84	Completed
5	60	Not Completed	72	Completed
6	72	Completed	80	Completed
7	64	Not Completed	76	Completed
8	60	Not Completed	80	Completed
9	68	Not Completed	92	Completed
10	64	Not Completed	80	Completed
11	64	Not Completed	84	Completed
12	68	Not Completed	84	Completed
13	56	Not Completed	76	Completed
14	72	Not Completed	80	Completed
15	72	Completed	96	Completed
16	76	Completed	80	Completed
17	68	Not Completed	84	Completed
18	80	Completed	88	Completed
19	68	Not Completed	80	Completed
20	80	Completed	92	Completed
21	84	Not Completed	100	Completed
22	60	Completed	76	Completed
23	80	Not Completed	100	Completed
24	60	Not Completed	76	Completed
Total	**1660**		**2028**	
Average	**69.3**	Not Completed	**84.50**	Completed
Classical Tenure	**42%**	Not Completed	**100%**	Completed

From the analysis of the student learning outcomes table and the pretest trial questions, it is known that 10 students have completed their learning outcomes with a percentage of 42% and 14 students have not completed them with a percentage of 58%, which means that classically the pretest trial results are not yet complete. While for the posttest questions, 24 students have completed their learning outcomes with a percentage of 100% and 0 students have not completed them with a percentage of 0%, which means that classically the students' learning outcomes are complete. The following is a picture of the increase in student learning outcomes as seen from the pretest and posttest scores.

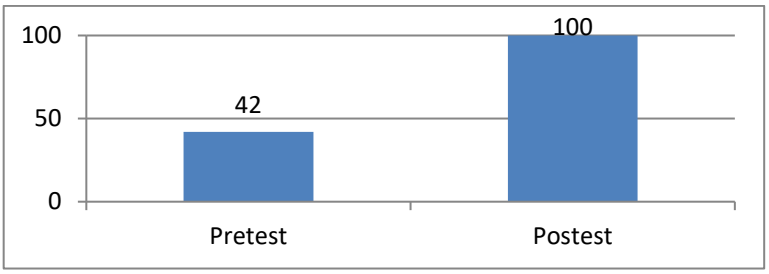

Figure 2. Pretest and Posttest Improvement Diagram

Effectiveness comes from the word effective which means having influence or effect. While effectiveness means success in a particular action. According to Kusmiarti (2019) that effectiveness is an action of student success in achieving certain goals that can bring maximum learning outcomes. The effectiveness of literacy-based worksheets can be seen from the results of the pretest and posttest. The effectiveness of using student worksheets is carried out by testing the Gain-Score value. Based on the results of the Gain Score calculation in table 4.18, it can be seen that the average for pretest questions reached 69 with the category of classical incomplete and the average posttest questions reached 84.5 with the category of classical complete. From the results of the pretest and posttest, the gainscore was calculated to reach 0.51 with moderate effectiveness. So it can be concluded that the use of student worksheets for students of SDN 101867 Payagambar class V is quite effective in improving students' high-level thinking skills.

Literacy-based LKPD has been proven to be effective in use. The findings in this study are in line with previous research conducted by Muzayyanah (2020). The results of the study indicate that student worksheets can make it easier for students to understand the material because student worksheets are easy to use, the material is in accordance with the student's book which is made clearly and attractively. In addition, these student worksheets can be used for experiments both in class, outside the classroom, and at home.

CONCLUSSION

The development of literacy-based LKPD to improve high-level thinking skills of semester II students of class V SDN 101867 Payagambar, Batang Kuis District refers to the research and development (R&D) research design using the ADDIE development model. The ADDIE stages in this study are arranged into a more detailed procedural guide, namely: analyze, design, development, implementation, and evaluation. The analyze stage is the initial stage, namely the researcher analyzes the needs and characteristics of students. The next stage is design. At this stage, the researcher designs a product consisting of (1) compiling test standards, (2) selecting media that are in accordance with the characteristics of the material and learning objectives, the media to be used are in the form of images and the environment around the student's residence, (3) selecting a format, namely reviewing existing LKPD formats and determining the LKPD format to be developed, (4) making an initial design

according to the selected format, designing literacy-based LKPD activities based on the steps and structure of LKPD preparation. The next stage is development, which is the stage of developing literacy-based LKPD according to the suggestions of the validator to produce an initial product. The next stage is implementation, which is the stage of implementing the product consisting of small group trials, medium group trials, and large group trials. The last stage is evaluation, which is the final stage of the product development procedure consisting of a comparison of the trial stage and product feasibility.

The feasibility of the LKPD that has been developed is known based on the feasibility assessment of the expert validator and the student response questionnaire. The validators consist of material, language, and layout design experts. The results of the validation of the material experts on the literacy-based LKPD were 80% with a feasible category. These data show that the material contained in the LKPD is in accordance with the basic competencies to be achieved and the development of students. The results of the validation of the LKPD by language experts were 85% with a very feasible category. This shows that the language used is straightforward, communicative, in accordance with the development of students, and in accordance with Indonesian language rules. Furthermore, the results of the validation of the layout design expert reached 90% with a very feasible category. This means that the developed LKPD has met the didactic, construction, and technical requirements well. The results of the student response questionnaire after conducting the LKPD trial were 86.7% with a very feasible category. Based on this data, it can be concluded that literacy-based LKPD to improve high-level thinking skills is very feasible/valid to use.

Literacy-based LKPD is declared effective in improving high-level thinking skills of second semester students in grade V. This is evidenced by the results of student learning tests. High-level thinking ability tests are used to determine the increase in student learning outcomes. The average pretest score for students is 69 with a classical completeness of 42% and the average posttest score is 84.5 with a classical completeness of 100%. To test the level of effectiveness of LKPD, it can be seen from the gain-score value obtained, which is 0.51 with moderate effectiveness. So it can be concluded that the use of literacy-based LKPD is effective in improving students' high-level thinking skills.

Implications

Based on the development and product trials that have been carried out in class V of SDN 101867 Payagambar, there are implications carried out by teachers and students in the learning process. The implications are explained as follows:

1. This LKPD was developed to be used as a learning tool to deepen the material for semester II. The literacy-based LKPD that has been developed is useful for learning Indonesian so that students can access, understand, and use information intelligently through the use of LKPD. This research is a contribution to the development of Indonesian Language LKPD in realizing high-level thinking skills.
2. Literacy-based LKPD to improve high-level thinking skills that have been developed can increase teacher knowledge in teaching literacy-based learning which contains an increase in high-level thinking skills. This LKPD provides encouragement, support, convenience, and motivation for students in literacy activities. This LKPD is equipped with a summary of literacy materials and activities. However, the largest composition of the contents of this LKPD is HOTS questions. After students read the material, students are asked to do various activities, then students are asked to work on high-level thinking skills. Learning using literacy-based LKPD can improve high-level thinking skills in semester II. The results of this study are useful as additional references for

school progress in finding solutions to learning problems and also as references in developing other teaching materials.

REFERENCES

Adisa, L. (2019). Pengembangan Lembar Kerja Peserta Didik (LKPD) Berbasis Higher Order Thinking Skills pada Materi Skala Kelas V Sekolah Dasar. *Jurnal Pendidikan dan Pembelajaran Ke-SD-an* 5(3): 646-654.

Fajriyah, & Agustini. (2018). Analisis Keterampilan Berpikir Tingkat Tinggi siswa SD Pilot Project Kurikulum 2013 Kota Semarang. *Jurnal Pendidikan dan Pembelajaran Ke-SD-an, 5*(1), 192-198.

Husna, H., Suyanti, R. D., & Yus, A. (2023). Development of Student Worksheet based on STEM to Improve the Critical Thinking Skills. *Randwick International of Education and Linguistics Science Journal*, *4*(3), 695-711. https://doi.org/10.47175/rielsj.v4i3.800

Husniyatun. (2021). Pengembangan LKPD Bahasa Indonesia Berbasis Keterampilan Proses untuk Meningkatkan Kemandirian Belajar Sekolah Dasar. *Jurnal Ilmiah Pendidikan* XII(2), 322-341.

Kusmiarti. (2019). Literasi dalam Pembelajaran Bahasa Indonesia di Era Industri 4.0. *Prosiding Seminar Nasional Bulan Bahasa (Semiba), Bengkulu, 211-222*

Muzayyanah, A. (2020). Pengembangan Lembar Kerja Peserta Didik (LKPD) Tematik Berbasis HOTS (Higher Order Thinking Skill) Kelas IV Sekolah Dasar. *Jurnal Pijar MIPA, 15*(5), 452-457.

Sudjana, N. (2007). Dasar-dasar Proses Belajar Mengajar. Bandung: Sinar Baru.

Sulistiyorini, S. (2018). Pengembangan Lembar Kerja Peserta Didik (LKPD) tematik Terpadu Mengintegrasikan Penguatan Pendidikan Karakter (PPK) dan Literasi SD di Kota Semarang. *Jurnal Kependidikan Dasar*, *9*(1), 21-30.

Trianto. (2013). Mendesain Model Pembelajaran Inovatif-Progresif. Jakarta: Kencana Prenada Media Group.