

# Development of Lkpd Based on PBL on Integrated Thematic Learning in Class V of Elementary School

Desrinelti<sup>1</sup>, Yalvema Miaz<sup>2</sup>

<sup>1</sup> Program Studi Pendidikan Dasar, Universitas Negeri Padang; Indonesia; Desrinelti@gmail.com

<sup>2</sup> Program Studi Pendidikan Dasar, Universitas Negeri Padang; Indonesia; yalmiaz@gmail.com

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## ABSTRACT

This study aims to describe the validity, practicality, and effectiveness of the LKPD with the theme of Animal and Human Movement Organs through the PBL (Problem Based Learning) learning method in integrated thematic learning in fifth-grade students of State Elementary School 12 and 19 Parambahan. This research is included in the research and development (Research and Development) adapted from the Borg and Gall model. Collecting data using observations, questionnaires, written tests, and interviews and then analyzing quantitatively and qualitatively. This study resulted in a teaching material in PBL-Based LKPD on Animal and Human Movement Organ Themes, and data analysis showed that PBL-Based LKPD on Animal and Human Movement Organ Theme was practical and engaging in learning.

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## Corresponding Author:

Desrinelti

Program Studi Pendidikan Dasar, Universitas Negeri Padang; Indonesia; Desrinelti@gmail.com

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## 1. INTRODUCTION

The curriculum often changes due to science, technology, and needs. The 2013 curriculum is a stage in curriculum development designed in 2004, and the 2006 education unit level curriculum includes affective, cognitive, and psychomotor, Permendikbud no 22, (2016). This curriculum change aims to find out internal and external problems in the community. The curriculum changes require the presentation of ineffective teaching materials that can affect the implementation of learning which causes students to feel bored where only a tedious learning process is given so that the learning implementation process cannot run conducive and learning objectives cannot be achieved. The implementation of monotonous lessons cannot foster critical and creative thinking in students. Sudarma, (2016) tries to develop his creativity to become a quality person.

Implementing these various curricula so that students participate in acquisitions that utilize various learning resources based on the lessons to be carried out where lesson materials can support the implementation of teaching and learning activities so that they are not monotonous in delivering subject matter to students in the 2013 curriculum using the PBL learning model Sinambela, (2017). Learning refers to providing direct experience in the lesson, especially on thematic, so that students participate in

learning activities. Kadir & Asrohah, (2015) stated that scientific activities such as observing and classifying as well as predicting or designing an experiment in the activity of discovering scientific ideas adapted to the 2013 curriculum.

Rusman, (2015) the thematic learning model supports the implementation of the learning process based on a thematic approach and is associated with various subjects. Meanwhile, according to Trianto, (2012) thematic lessons can integrate subjects into one theme. Andi, (2014) also explained thematic lessons, namely management of the learning process that uses a thematic approach in integrating subjects.

The classroom environment is an environment that can support the learning process so that it can be achieved where the implementation of lessons is based on objectives and the use of approaches related to the lesson. The learning environment is related to children's learning conditions because in implementing the learning process, they must pay attention to the environment and learning conditions for students in accordance with the juridical basis (Fitria, 2018). The juridical basis is (Indonesia, 2002) Law no. 23 of 2002, both teachers and teaching about forming the nation's children who have a position in the future.

The results of observations on March 2, 2021, explained that even though lessons had implemented the 2013 curriculum, students still focused on educators and did not participate much in the implementation of ongoing lessons. Where education in learning is still centered on books so that it does not involve students in prose lessons, resulting in students not being interested in participating in learning activities carried out by teachers with a learning atmosphere that cannot be created conducive. The objectives of the teaching and learning process are difficult to achieve. In the implementation of learning, educators also apply LKPD, where the LKPD prepared and designed by the teacher is not under the subject matter that will take place so that students find it challenging to understand the subject matter.

The results of observations show that in learning activities at SD Negeri 12 Parambah, students are less involved during lesson activities so that the material conveyed is not understood by students besides that students in lessons do not provide ideas and critical ideas about some of the above make students unable to apply them. When learning activities take place, the observations carried out also saw the limitations of students in implementing the LKPD who were instructed to directly work on the LKPD that had been provided without giving instructions in the process, so that students experienced difficulties in understanding the material and assignments given by the educator. According to Ngalimun and Pd, (2014) the PBL model is a learning model that can involve students in learning activities to foster critical thinking in students in solving a problem.

In addition to the Problem Based Learning (PBL) approach, good support is needed to implement lessons based on this approach can achieve the learning objectives. One of the supporting teaching materials needed for the learning approach is the LKPD, as the activity sheet that underlies for application to direct experience in the real world, where students are required to implement their knowledge through tasks that must be done. LKPD is a program that educators have provided in the explanation or instructions in working on LKPD. Sari, Amini and Mudjiran, (2020) LKPD can be in the form of guidelines or instructions in carrying out an exercise to improve the knowledge and skills of students through observation and demonstration. LKPD is a guide in improving the thinking and responsibility of students in participating in ongoing learning activities. According to Mulyani and Farida, (2020) "LKPD has a position in learning activities, namely a guideline in growing the potential for critical thinking in reasoning about solving a problem that educators have provided. Therefore, educators are required to be able to improve and develop LKPD in the implementation of the learning process. Choo et al., (2011) explained that LKPD is a tool in the lesson that contains questions about the ongoing subject matter. According to Yasir, (2013) LKPD is a stimulus presented and compiled by educators that contain subject matter to grow knowledge in students, which contains questions about the subject matter.

Hartman et al., (2013) research results show that PBL positively impacts students to improve their ability to solve the problems they encounter. Yıldırım et al., (2011) found that research results obtained by collaborating LKPD with PBL proved to help students understand a subject matter, actively participate during the learning process, and improve children's learning effectiveness achievement. Arifin & Tiun, (2013) ) showed that the final score of the LKPD was in the excellent category with a result of 83%. Sudirman, (2016) concluded that the validity of the LKPD on the aspects of content suitability, attractiveness, and ease was included in the very high category with a percentage of 83%. Halim, (2016) based on the results of the LKPD effectiveness test, it was found that the average value of critical thinking skills of students was very high with a value ( $p = 0.000$ ), the results of the benefits test had a percentage of 91.31% with advantageous criteria. Triana et al., (2017) conclude that using a learning approach is more effective than traditional. From the results of previous studies, there are similarities in developing LKPD using a learning approach, but the difference with the research carried out lies in the material, class, time, and place of research. Put forward PBL, which is a model that can assist teachers in developing the thinking of their students in solving a problem regarding the lesson material that has been provided (Seng, 2003). Tan Onn Seng, Norman, and Schmidt in the Ministry of Education and Culture (2013: 37) argues that the purpose of PBL is to grow and improve student performance in solving a learning problem regarding ideas or concepts of high order thinking skills, which can provide direction to students in enhancing the various abilities that exist in him. According to Bawamenewi, (2019) (2013 Sudirman (2016) Halim (2016), Triana et al. (2017) (Seng, 2003). Bawamenewi (2019), "Problem Based Learning Models are learning models that provide direction to students in solving authentic problems so that students have the ability to solve them.

According to Effendi, Herpratiwi and Sutiarto, (2021) Problem Based Learning is also a learning model where the learning system that was initially guided by the teacher (teacher center) becomes a lesson that focuses on students (students center). The characteristics of the Problem Based Learning (PBL) model proposed by Baron in (M.-M. P. Rusman & Guru, 2012) are 1) concretely examining a problem. 2) learning activities study problem-solving. 3) the students set the objectives in the teaching and learning process. 4) educators have a role as a facilitator. Fitria (2020) suggests that the characteristics of the PBL model start from the orientation of a problem found in the LKPD, organizing students to learn, guiding and, developing and presenting a product by motivating students to complete the LKPD as well as analyzing, evaluating ideas that are not appropriate, strengthening correct ideas.

Based on the observations obtained, the authors think that there is a need for improvements in teaching and learning activities for fifth-grade students at SD Negeri 12 Parambahan, Lima Kaum District. In order to create learning activities that can explain problems, and involve students in learning, for this reason, it is necessary to develop LKPD in integrated thematic lessons based on Problem Based Learning (PBL) in class V of Elementary School.

## 2. METHODS

The research carried out is in research and development or Research and Development (R & D). Borg and Gall (1983: 567). to be achieved from the research. Research and development can produce a product that has a high appeal to be implemented in the world of education. Based on research and development, the authors study a product that will be produced in the research they carry out. This includes the development and validation of a product. A product obtained based on development and research, namely LKPD, is required to increase students' potential and skills.

The research subjects were SDN 12 Parambahan and SDN 19 Parambahan. The author chose the school based on observations at the needs analysis stage. Based on these observations, it is known that teachers and students need LKPD with PBL learning which can be used to make it easier for students to master the material on the theme of animal and human limb movements. The object of research is LKPD with the theme of animal and human limb movements with PBL-based learning, and the research subjects are experts and product examiners who test the validity of the LKPD. The experts who tested

the validity of the LKPD consisted of material, language, and design experts and fifth-grade students at SDN 12 and 19 Parambahan as users who assessed the level of practicality, usefulness, ease of implementation of the LKPD, and the effectiveness of the LKPD.

The data taken in the validation stage of several experts include the appropriateness of the content, language, presentation, and graphics of all the contents of the LKPD learning media. Meanwhile, data from students include their understanding of the material through learning media in the form of LKPD and learning outcomes after using the media. The data obtained in this media validation is in the form of quantitative and qualitative data. Quantitative data were obtained from validators and respondents through validation questionnaires and the time allocation of students during the trial, while qualitative data was obtained from the results of criticism and suggestions from both validators and students. The description of the trial implementation and learning difficulties of students and the results of interviews before the trial was carried out. The data in this development research were collected using instruments in questionnaires and tests. The data analysis technique used in this research is the descriptive data analysis technique by describing the validity, practicality, and effectiveness of using LKPD.

Based on this description, it can be concluded that what was stated by Borg & Gall, development research is based on the stages, namely (1) discovery and data collection, (2) planning, (3) initial product development, (4) field experiments, (5) revision of the results of field experiments, (6) first field trials, (7) revisions of operational products, (8) refinement of the final product, (10) implementation.

### 3. FINDINGS AND DISCUSSION

Activities at the needs analysis stage are conducting a preliminary test to schools as research samples, namely class V SD Negeri 19 Parambahan and SD Negeri 12 Parambahan in particular, which will be used as experimental and control classes for the development of this LKPD. The purpose of this preliminary study is as an initial descriptive study, which is to collect information and identify learning activities in fifth grade elementary school, which are used as material for consideration and the basis for developing LKPD to be developed. This stage is helpful in research and development, which will be tested in teaching materials in the form of LKPD to increase effectiveness.

Collecting information about analyzing a need is carried out based on observations, interviews, and the distribution of questionnaires in the form of questionnaires given to teachers who have used LKPD in the form of worksheets appropriate for their class. However, the LKPD used is a product made from a factory or market that is not in accordance with the conditions. the students are at SD Negeri 19 Parambahan and SDN 12 Parambahan. Furthermore, the LKPD model is the LKPD model based on the PBL approach, namely the LKPD, which is designed based on activities based on the theme of Animal and Human Movement Organs. Since the experiment and designated as a preparatory school and a reference school for the 2013 curriculum, thematic books have been used by integrating subjects into one theme and sub-theme. Thus, it is necessary to use teaching materials as a companion or learning supplement in the form of LKPD helpful in developing learning materials.

#### 3.1. Curriculum Analysis Stage

In this stage, the implementation of syllabus mapping is based on the analysis of standard content, core competencies, and basic competencies and indicators using LKPD during the learning process. PBL-based LKPD with the theme of Animal and Human Movement Organs in the fifth grade of elementary school. The stages can be carried out in syllabus mapping: (1) knowing the analysis of graduation competency standards based on Permendikbud No. 20 of 2016 concerning SKL for primary to secondary education. The level of suitability of teaching materials measured by educators includes the cognitive, affective, and psychomotor domains. (2) analyze Core Competencies, Basic Competencies taken from Attachment I to Permendikbud number 57 of 2014, develop indicators, and determine the types of tests that can improve student learning achievement. (3) designing PBL-Based LKPD with Animal and Human Movement Organs theme. (4) determine the duration of time in applying the PBL-

Based LKPD with the theme of Animal and Human Movement Organs. (5) Planning for thematic lesson activities for class V (five) Sub-theme 1 Learning 1 to 6 and Sub-theme 2 Learning 1 to 3. Mapping curriculum analysis as the basis for developing PBL-based LKPD with the theme of Animal and Human Movement Organs.

After mapping the content standards consisting of Core Competencies and Competency Standards for sub-themes 1 and 2 for class V, the next step is to analyze the interrelationships between learning packaged in one theme and several sub-themes for the distribution of Core Competencies, Basic Competencies, and indicators and developed in several lessons. The mapping of the connectivity of Basic Competencies and Indicators of this development research is to create an integrated integration for the subjects of Science, Indonesian Language, Civics, Mathematics, Natural Sciences, and SBDP. This integration was developed through PBL-based LKPD with the theme of Animal and Human Movement Organs packaged in several sub-themes and learning processes.

The next step is to develop indicators of each Basic Competencies as the basis for determining the learning objectives to be achieved from each subject. Mapping of Basic Competencies and Indicators is centralized in one thematic learning activity that is integrated in an integrated manner, and this integration is based on linkages to other subjects.

### **3.2. Analysis of Student Characteristics Stage**

The research was carried out at SD Negeri 19 Parambahan and SDN 12 Parambahan for the academic year 2021/2022, which consisted of 2 schools with 38 students, with the object of research is the class V students. The research was carried out by researchers in class V at SDN 19 Parambahan as an operational trial. SDN 12 Parambahan is the primary test site. The observer's consideration is the teacher at the observer school. Currently the principal of SDN 12 Parambahan is Desrinelti, S.Pd.SD and the principal of SDN 19 Parambahan Yusafnelli, S.Ag. The fifth-grade teacher, as a source of information from SDN 12 Parambahan, is Alfizaida Z., S.Pd.SD and the fifth-grade teacher. SDN 19 Parambahan is Elda Nengsi, S.Pd.

Based on the criteria, learning materials are needed in the form of LKPD as a tool to help develop the material and learning reference material or student book companions and to increase student activities during lesson implementation. In line with the questionnaire results given to the fifth-grade teacher, which stated that learning activities had not been maximized in learning.

### **3.3. Product Design Planning Student Worksheet Development**

This stage is carried out by designing LKPD prototypes based on the 2013 curriculum, namely the planning and development of PBL-based LKPDs based on the suitability of Core Competencies (KI) and Basic Competencies (KD) in the 2013 Curriculum content standards, which are combined with the teacher's handbook and student handbooks that are applied when lesson activities. Product design planning is specifically based on the following planning stages:

In preparing content standards in the curriculum based on core competency mapping, basic competencies based on syllabus studies are designed in the form of an illustration that relates the theme to KI and KD. This stage is carried out as a control for the material development, so it will not deviate from the content standards that have been set in the curriculum so that the mapping between KI, KD, and learning indicators can be combined according to the learning approach used. The LKPD design framework is arranged sequentially as follows:

1. Page Title/Cover
2. Preface
3. Mapping of Basic Competencies
4. Study Guide
5. Identity

6. Activities that students will carry out are divided into each lesson, where one sub-theme consists of 6 lessons
7. Scoring Rubric
8. Summary
9. Bibliography

In carrying out observations, it is necessary to prepare suggestions for supporting observations. Observation sheets are used to express knowledge directly about the activities of students and the activities of educators when learning activities are carried out from the beginning to the end of the lesson—documenting all activities from the results of research observations. This stage is a qualitative data collection activity from observations about student activities and educator activities during lesson activities that are useful for developing planned product designs.

### 3.4. Pre-Writing of PBL-Based LKPD

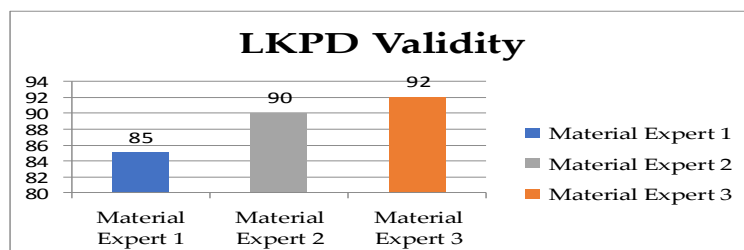
The initial stage of the pre-writing step of the PBL-Based LKPD with the theme of Animal and Human Movement Organs is to collect sources and references about the integration of materials based on the distribution of material mapped between basic elements competencies and learning indicators.

### 3.5. PBL-Based LKPD Draft Writing

The step of writing the LKPD draft is the stage of compiling the LKPD section, which is adjusted to the product specifications that have been previously planned. Student Worksheets made based on the standard process of the Minister of National Education No. 22 of 2016, which contains problem-solving, thought processes and evidence, communication, connections, and representation. In addition, the Student Worksheet is accompanied by Core Competencies (KI), Basic Competencies (KD), Competency Achievement Indicators, the scope of material refers to the applicable curriculum syllabus, namely the 2013 Curriculum. The Environment and Its Benefits. The LKPD developed is designed with: title description, Basic Competency Mapping, user manual for students, identity, activities to be carried out by students, summary, and reference list. This is an integrated thematic LKPD presented with a PBL approach. In the form of print media with A4 paper size. LKPD is applied with the help of the SQ3R method (survey, Question, Read, Recite, Review). LKPD contains color pictures that increase student interest. Apart from attracting students' attention, this image is also used as an illustration related to the real-life of students.

### 3.6. LKPD Validity

Assessment by material and learning syntax experts includes the suitability of LKPD based on didactic, construction, and technical criteria. The evaluation and validation of the material were carried out by two lecturers from Padang State University, Dr. Yeni Erita M.Pd and Dr. Desyandri, M.Pd. They are Doctor of Education and a postgraduate lecturer in Elementary School Teacher Education, and also a lecturer in Master of Education who graduated from Padang State University named Yona Yolanda teaches at SDN 24 Tanjung Bonai, North Lintau Buo District. The results of the assessment by material experts are:



Graph 1. Assessment by The Expert

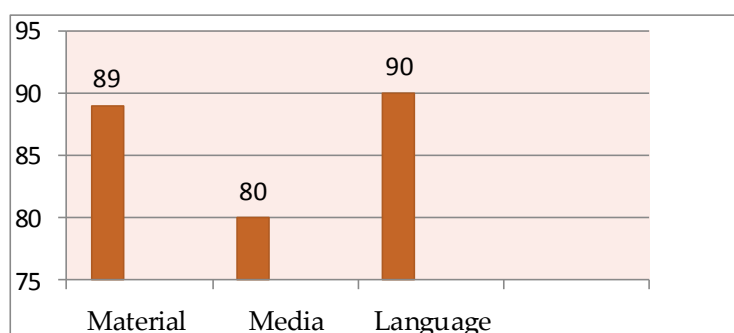
Based on the graph above, it is explained that the assessment by experts on the PBL-Based LKPD with the theme of Animal and Human Movement Organs for class V in Elementary Schools. The completeness of the material in the LKPD is categorized as very good. Suggestions for improvement in the assessment by experts in LKPD in class V in elementary school are:

1. Pay more attention to the PBL steps,
2. Adjust the instructions with those carried out on student activities,
3. Use original colors,
4. Separate LKPD from learning materials,
5. Complete the LKPD elements, including conclusions.

### 3.7. Media Expert Assessment

Assessment by media and learning syntax experts includes the suitability of LKPD based on didactic, construction, and technical criteria. The evaluation and validation of media expert products were conducted by Dr. Darmansyah M.Pd., a Doctor of Education from Padang State University and a postgraduate lecturer at Padang State University Master of Education.

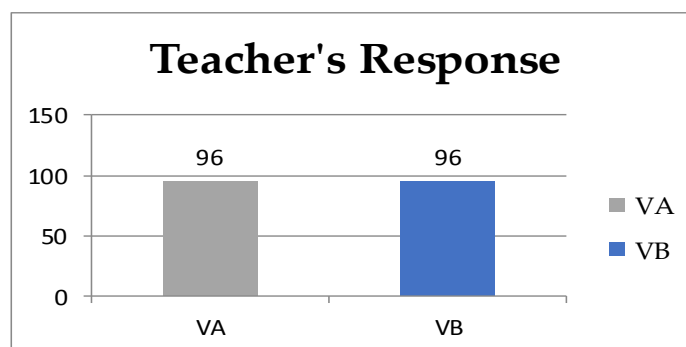
Based on validation by linguists, there are inputs for the validation of language experts so that they can be used as input and guidelines in improving the LKPD product or revising it, such as using sentences and language that students understand, but overall it can be used in classroom learning. Referring to the category of validity criteria, the achievement of validity is categorized as very valid. The following table is a recapitulation of material validation, language, and LKPD media. Obtaining an analysis of the validity of the LKPD material, language and media are illustrated in the graph:



**Graph 2.** Results of the Validity Test of LKPD Materials, Media, and Languages

Based on the description above, the score obtained from the validation in the indicator has been declared valid, but there is input in the assessment sheet by validation to be used as a reference in product revision.

After the validation process with the experts is complete, a trial is carried out to see the practicality of the learning media. The trial was carried out in 9 meetings. The practicality of PBL-based LKPD in integrated thematic learning is reflected in the practical analysis carried out by educators and students. The teacher response assessment aims to determine the teacher's opinion on the practicality of the LKPD developed. The results of the teacher's practicality assessment can be seen in the following graph:



**Graph 3.** Results of Teacher Responses to LKPD Practicality

The graph above illustrates the percentage of teacher responses to PBL-based LKPD when implementing integrated thematic lessons in fifth-grade elementary school, which is in the efficient criteria, namely the percentage of 96%. The efficient means that the LKPD has complied with the predetermined criteria.

### 3.8. Student Practical Test

At the end of the field trial meeting, this student practicality test sheet was filled out by 38 students, namely 22 students from SDN 12 Parambahan and 16 students from SDN 19 Parambahan. Student responses to the practicality of the LKPD show that the student's response to the practicality of the LKPD is 84%, with an efficient category.

### 3.9. Effectiveness

The effectiveness of a product is seen after the product is declared valid and practical. The effectiveness of PBL-based LKPD in integrated thematic learning can be seen through evaluating student learning. LKPD is declared effective if assessing learning outcomes reaches 70% completeness or above the KKB (Learning Completeness Criteria). Knowing whether LKPD affects learning achievement, the observers conducted a pretest and posttest on the fifth-grade students of SDN 12 Parambahan and SDN 19 Parambahan. The following is an explanation of the students' pretest and posttest data:

**Chart 1.** List of Pre-test and Post-test scores

No	Student's Name	Pre-test	Post-test	Note
1	AWP	47	70	Go up
2	BOV	36	76	Go up
3	DZM	41	70	Go up
4	IDA	32	70	Go up
5	IRS	35	70	Go up
6	JUA	48	70	Go up
7	MAD	35	50	Go up
8	MFK	48	67	Go up
9	MLA	29	58	Go up
10	QHA	43	85	Go up
11	RFC	41	73	Go up
12	RHD	38	79	Go up
13	RHQ	41	77	Go up
14	RAP	28	70	Go up
15	RHP	38	70	Go up



16	RMP	40	70	Go up
17	RGK	39	52	Go up
18	STR	42	66	Go up
19	SAY	42	70	Go up
20	TQH	34	70	Go up
21	ZHD	35	77	Go up
22	ZBA	46	81	Go up
Total		857	1541	Very Good
Average		38.95	70,04	

Source: Grade V students of SDN 12 Parambah

There are differences in comparing students' pre-test and post-test scores. The pre-test results obtained an average of 38.95 percent, and, at the post-test, it increased to 70.04 after using LKPD. This shows an increase in student learning outcomes after using the LKPD so that students who use the LKPD can achieve scores above the KKB.

### 3.10. Revision of Initial Field Trial Results

After finishing designing a product that is validated based on the evaluation of material, media, and linguistic experts regarding the device being developed, the observer then revises the product design that has been designed based on the input provided by media experts and language experts. The following are the results of suggestions and revisions by the validator:





Before revision	After revision
STUDENT WORKSHEET (LKPD) CLASS 5 ELEMENTARY SCHOOL ANIMAL AND HUMAN MOVEMENT ORGANS	STUDENT WORKSHEET (LKPD) CLASS 5 ELEMENTARY SCHOOL ANIMAL AND HUMAN MOVEMENT ORGANS
	

Figure 1. Header display before and after revision

The corrected display is the image used, select the original color image, corrected according to input from validation.

Before Revision	After Revision
 <p>Try to tell the following series of illustrations according to your understanding!</p>	 <p>Try to write the following series of illustrations according to your understanding and develop them into a story!</p>

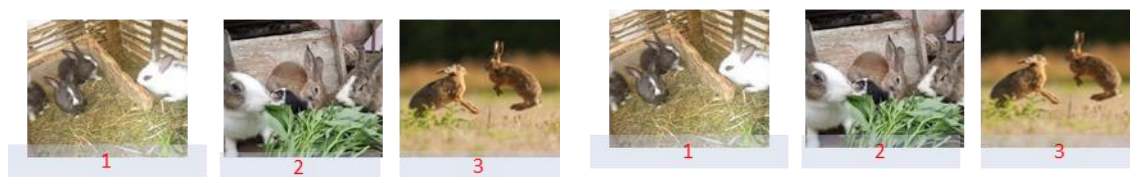


Figure 2. Display of Student Activity Pages in PB 2

Improved display is the command word. If the student activity is "let's write" then the command word is also writing, not telling stories. Corrected according to input from validation.

Before Revision		After Revision	
<b>Let's Observe It</b> 		<b>Ayo Mengamati</b> 	
1	ANIMAL NAME	MOVEMENT ORGANS NAME	FUNCTION
2	FISH		
3	FROG		
4	BIRD		
5	SNAKE		
6	GOAT		

O	ANIMAL NAME	MOVEMENT ORGANS NAME	FUNCTION
	FISH		
	BIRD		
	FROG		
	GOAT		






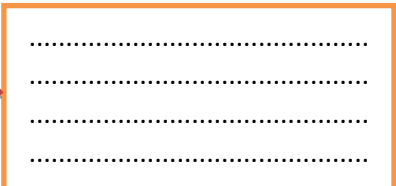
Figure 3. Student Activity Page Display in PB 2

The display that gets the correction is the less clear command word, which one is observed, whether in the form of pictures or real animals—fixed according to input from validation.

Before Revision	After Revision
LEARNING INSTRUCTIONS	LEARNING INSTRUCTIONS
<p>Before studying using this book, students should pay attention to the following suggestions:</p> <ol style="list-style-type: none"> <li>1. This LKPD is equipped with learning indicators</li> <li>2. Pay attention and study the material in this student worksheet</li> <li>3. Read other sources to gain insight</li> <li>4. Work on the questions in the LKPD by paying attention to the instructions.</li> </ol> <p>With the above instructions, it is expected to gain knowledge about ANIMAL AND HUMAN MOVEMENT ORGANS. Through a thematic approach, mastery of LKPD can be achieved.</p>	<p>Before studying using this book, students should pay attention to the following suggestions:</p> <ol style="list-style-type: none"> <li>1. This LKPD is equipped with learning indicators</li> <li>2. Pay attention and study the material in this LKPD</li> <li>3. Read other sources to gain insight</li> <li>4. Work on the questions in the LKPD, paying attention to the instructions.</li> </ol> <p>Students are expected to learn about the Movement Organs of Animals and Humans with the above instructions. Through a thematic approach, mastery of LKPD can be achieved.</p>

Figure 4. Learning Instructions Page Display

The corrected display is the writing of prepositions, and some sentences use capital letters. Corrected according to input from validation.

Before Revision	After Revision
<p>Let's Adventure</p> <p>Map of geographical conditions of Indonesia</p>  <p>From the map image above, discuss with your friends the area and location of the country of Indonesia. Then write down the results of the discussion in the column below!</p>	<p>Let's Adventure</p> <p>Map of geographical conditions of Indonesia</p>  <p>From the map image above, discuss with your friends about the area and location of the country of Indonesia. Then write down the results of the discussion in the column below!</p>
 	 

Gambar 5. Tampilan Halaman Kegiatan Siswa Pada Pembelajaran 3

The display is corrected by providing an outline in the story column. Corrected according to suggestions and input from validators.

### 3.11. Main Field Trial

When finished carrying out design improvements and revising them, the main field Trial is carried out for product effectiveness. Trial were conducted to assess the effectiveness of a product that has been designed (Emzir, 2011:273). For nine meetings, the main field Trial was conducted in class V SDN 12 Parambah. The field Trial was carried out on 22 students consisting of 8 girls and 14 boys. The full results of the main field Trial are in the appendix. The following is a recapitulation result of the main field Trial on PBL-Based LKPD with Animal and Human Movement Organs in Grade V of Elementary School.

**Table 2.** Recap of Main Field Trial Results

No	Score	Criteria	Frequency	Percentage (%)
1	81 - 100	Very Good	2	9,09
2	66 - 80	Good	17	77,27
3	51 - 65	Fair	3	13,63
4	0 - 50	Less	-	-
Total			22	100,00

Source: Main Field Trial Value Data

From the data in Table 2. it is known that the results of the implementation of learning, most of the students have obtained learning outcomes reaching a good criterion value of 77.27% or 17 students, students who get a very good category are 9.09%, students who get a bad category are 13,63%. The mean score reached 70.04 out of 22 (twenty-two) students who were tested. This indicates that the use of project-based LKPD can influence student understanding in grade V at SDN 12 Parambahan. Full details are attached.

Based on the achievements in the chart, it is illustrated that the level of student understanding in doing exercises and solving problems based on the direction of the educator or in collaboration with other students provides a meaningful learning experience from what is learned. Students will be sharpened in their learning independence through direct observation learning activities.

### 3.12. Operational Product Revision

When finished conducting field experiments, observers revise the designed design, which refers to the reinforcement being tested and the deficiencies that still exist in the product when conducting trials. The following deficiencies were found:

1. In Lesson 2, there is no sheet for writing stories.
2. In Lesson 3, there are pre-test questions that are not following the material and LKPD.
3. The order in the LKPD is for someone with a seatmate; it should be a group of friends.
4. Some children do not understand how to fill out learning worksheet 4, about the geographical situation of Indonesia

The researchers revised and corrected the findings from these shortcomings according to the suggestions and findings so that students would better understand the LKPD products that the researchers would do in the next stage.

### 3.13. Operational Trial

The next stage is an operational trial conducted at SD Negeri 19 Parambahan. Operational trials were carried out for nine meetings. There are achievements in operational trials as follows:

**Chart 3.** Recap of Operational Trial Results in Class V SDN 19 Parambah

No		Score	Criteria	Frequency	Percentage (%)
1	81	- 100	Very Good	9	60
2	66	- 80	Good	5	33,33
3	51	- 65	Fair	0	0
4	0	- 50	Less	1	6,66
Total				15	100,00

Source: Operational Trial Value Data

Table 3. shows the overall score obtained by students in integrated thematic learning using LKPD with the theme of animal and human movement organs. The highest score is 93, and the lowest score is 9. The very good category is 9 students or 60%, the good category is 5 students or 33.33%, there is no for fair category, and the less category is 1 student or 6.66%. These results are in the good category. The large group test using LKPD learning resources found that student learning achievement was increased based on the application of PBL-based LKPD during learning compared to those who did not use the product.

#### 4. CONCLUSION

Based on the research and development that has been completed, it can be concluded that the development and research that has been carried out can produce a product, namely PBL-based LKPD, where the LKPD is designed based on a project approach that refers to the 2013 curriculum. The results of the validity of the LKPD with the PBL approach with the theme of animal and human movement organs are categorized as very valid based on the results of research and development carried out by material, media, and language experts, which have been improved once with Mark. Obtaining LKPD practical results in the theme of animal and human movement organs is categorized as very practical, this is because the research and development that has been carried out have reached 85 percent, and for teachers, it has been 96 percent in the efficient category. The experimental results regarding the effectiveness of students' learning achievement were obtained based on the data of pre-test and post-test scores. In the pre-test score, the result was 44 percent, and at the post-test, it increased to 77.2 percent after using PBL-based LKPD products in integrated thematic lessons, which showed an increase in student learning outcomes after using LKPD.

The results of the development of PBL-based LKPD Teaching Materials with the theme of animal and human movement organs have some time constraints due to the Covid-19 pandemic, and dissemination was not carried out due to time and cost limitations, so the distribution was only carried out on a limited scale. This research implies that LKPD as a PBL-based supplement on the theme of animal and human movement organs can be used in classroom learning to increase the effectiveness and student learning outcomes and provide a stimulus to students to study independently.

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