

# Development of Plane Figure Student Activity Sheet Based on Guided Inquiry to Train the Creative Thinking Ability of Elementary School Students

Atik Budiarti<sup>1</sup> Yuniawatika<sup>1,\*</sup> Tri Murti<sup>1</sup>

<sup>1</sup> Department of Primary School and Preschool Education, Faculty of Education, Universitas Negeri Malang, Malang, Indonesia

\*Corresponding author. Email: [yuniawatika.fip@um.ac.id](mailto:yuniawatika.fip@um.ac.id)

## ABSTRACT

The purpose of this research and development is to produce a valid and practical of student activity sheet (LKPD) based on Guided Inquiry Flat Build Material to Train the Creative Thinking Ability of Class VI Students at SDN Banggle 02. This study using ADDIE research model, which has five stages of development, namely the analysis phase, which is analyzing needs. This design stage is formulating learning objectives, designing assessment instruments, and designing LKPD, the development stage, which is developing LKPD and conducting validation and the implementation stage, which is the implementation of a trial limited and field trials, and the evaluation stage is evaluating LKPD. Based on the results of the validity test conducted by material experts obtained a percentage of 95.3%, media experts obtained a percentage of 100%, while user experts get 100%. So, it can be said that LKPD Based Guided Inquiry is very valid and can be used. The practicality test results obtained from the questionnaire from teacher and responses of students amounted to 100% and 96.67%, so it can be said that the LKPD Based Guided Inquiry is very practical and can be used. Based on the results of this study it can be concluded that this research and development resulted in a product in the form of LKPD based on guided inquiry flat build material to practice the creative thinking skills of grade IV students that are valid and practical in SDN Banggle 02 Blitar Regency.

**Keywords:** Activity Sheet, Guided Inquiry, Plane Figure

## 1. INTRODUCTION

The ability to think creatively in the 21st century is very much needed in the progress of a nation. Human resources who have the ability to think creatively will be able to solve problems from problems faced at present and in the future. Strengthening character education in elementary schools is an essential milestone in training students' creative thinking skills. One of the subjects in elementary schools that is a forum for training students' creative thinking skills is mathematics. This is in line with Yuniawatika [1], mathematics is essential to develop students' thinking skills and instill character education in students so that with this ability, students are expected to be able to survive in uncertain and competitive conditions.

Mathematics is a field of study that must exist at all levels of education. According to Susanto [2], mathematics is one of the disciplines that can improve the ability to think and argue, contribute to solving everyday

problems, and in the world of work, and provide support in the development of science and technology. Therefore, the creative thinking skills of students in elementary schools need to be developed in learning mathematics.

Mathematics learning in elementary schools has several areas of material. One of them is geometric material. According to Nur'aini, et al. [3], geometry is one of the fields in mathematics that studies points, lines, fields, and spaces and their properties, measures, and relationships with one another. The shape of the plane is part of the material geometry.

The material of flat shapes in elementary schools includes the properties, circumference, and area of a flat shape. The waking material is closely related to everyday problems. Therefore, planting the concept of flat shape material is very important to be applied in learning. The planting of the idea of material should be preceded by the activity of looking to find facts such as flatform formulas, which will be useful in solving mathematical problems.

The concept of planting activity can develop students' creative thinking skills.

Therefore, it is necessary to support appropriate teaching materials so that students' creative thinking abilities can be developed optimally. But in reality, in the field, many of the teaching materials used do not contain learner-centered activities. This is in accordance with the results of the fourth-grade teacher interview at SDN Banggle 02 Blitar Regency on December 14, 2019, that in learning mathematics, the teaching materials used by students, namely textbooks, still contain a lot of material and question exercises. Actually, the textbooks used also contained LKPD, but the activities at LKPD did not invite students to find the concept of flat shape material. Ms. Yuli Ismiati also said that students were once invited to find the formula for the area of a flat shape with the help of box book media, but in practice, students still experienced communication problems that were not yet smooth with the teacher. So that in the end the teacher used the lecture method to directly inform the formula for the area of the flat shape. In addition, based on the observations of teaching materials for grade IV SDN Banggle 02, it shows that the weakness of the textbook used is that it has not fully provided space for students to solve the problems presented themselves. For example, there is a student LKPD that invites students to discover the properties of rectangular and rectangular shapes. Still, right at the bottom of the LKPD there are answers related to the properties of rectangular and rectangular shapes. So that it does not train students to think creatively.

Based on interviews with fourth-grade students at SDN Banggle 02, that in mathematics learning, students still find it challenging to build flat material, especially in applying existing formulas to solving story problems. So that students say that in learning mathematics, they still need guidance and direction from the teacher. Therefore, alternative solutions that can solve problems and can develop students' creative thinking skills in learning mathematics, especially flat-building material, namely by using guided inquiry-based LKPD. The guided inquiry model is a student-centered learning model with the teacher as a facilitator and guide. This is following the opinion of Murnaka & Dewi [4], that one of the efforts that teachers can make to improve the ability to understand the concept of mathematical material is to guide students to find and find their own concepts from such material. The teacher's activities in guiding students cannot be separated from the characteristics of elementary school students who still need guidance and guidance while studying. Therefore, the guided inquiry model is required to be applied in LKPD.

Research & development of guided inquiry-based LKPD aims to produce LKPD that can help students learn to think creatively to find a concept that exists in flat shape material. This is reinforced by research by Rochana [5]; the development of creative thinking skills is one of

the focuses of learning mathematics. In addition, according to Hapsari & Sudarisman [6], guided inquiry learning can increase students' creative thinking skills in learning. Class IV students of SDN Banggle 02 Blitar Regency also think that, with the activity of finding a concept that is guided by the teacher, LKPD can increase their understanding regarding the material of flat shapes. Departing from the existing problems and potential, the title in this research and development is "Development of Plane Figure Student Activity Sheet Based on Guided Inquiry to Train the Creative Thinking Ability of Elementary School Students". The purpose of this research & development is to produce LKPD based on guided inquiry material flat to train the creative thinking skills of class IV students which are valid based on material experts, media experts, and according to users and practical according to students.

## 2. METHOD

The type of research and development of this guided inquiry-based LKPD is R & D (Research and Development). The development of LKPD based on guided inquiry material for flat shapes was carried out following the research and development stages of the ADDIE model. According to Tegeh [7], there are five stages of the ADDIE model, namely Analyze, Design, Development, Implementation, Evaluation. This research was conducted at SDN Banggle 02 Blitar Regency in the second semester of the 2019/2020 academic year from March 2, 2020, to March 31, 2020. While the research subjects in this study were 20 students of SDN Banggle 02 Blitar Regency.

The Research and Development procedure, namely in the first stage, is analyze (analysis). The main activity at this stage is needs analysis. In the analysis, activities carried out by interviewing teachers and students and observing the teaching materials used in mathematics learning in schools. The second stage is the design. At this stage, the draft LKPD is developed. The first thing to do is to make learning objectives and activity scenarios in LKPD according to the guided inquiry learning model. Then, compile an outline of the LKPD in the form of material selection and questions that are tailored to the characteristics of students. Also, at this stage, a validation instrument was designed for material experts, media experts, and user experts as well as a student response questionnaire. Furthermore, the researchers made a template design and LKPD cover using the Canva application. The third stage is development. Activities at this stage are developing guided inquiry-based student LKPDs and product validation carried out by validators, namely material experts, media experts, and teachers as users. The suggestions and input from the validator are used as material for product improvement to make it even better. Next, the fourth stage is implementation.

**Table 1.** Criteria for Categorization of Validation Results

Achievement rate (%)	Category	Test Decision Category
85,01 – 100,00	Very valid	Can be used without revision
70,01 – 85,00	Quite valid	Can be used, but needs minor revisions
50,01 – 70,00	Less valid	May be used with significant revision
01,00 – 50,00	Invalid	Cannot be used

The implementation or implementation stage is the carrying out of LKPD trials that have been developed for students. In this study, limited trials and field trials were carried out. The limited trial (small group) was conducted on 6 grade IV students at SDN Bendo 02 Blitar City. While the field trial was carried out on 24 grade IV students at SDN Banggle 02, Blitar Regency. Furthermore, the fifth stage is the evaluation (evaluation). Evaluation is a process to determine whether the guided inquiry-based LKPD developed is appropriate or not.

The types of data contained in the development and research of guided inquiry-based LKPD are quantitative and qualitative data. Quantitative data in the form of the percentage of student LKPD validity obtained from product feasibility testing through questionnaires given to validators and users as well as product practicality testing through teacher practicality questionnaires and student responses given in limited trials and field trials. Qualitative data were obtained from suggestions and input from material experts, media experts, and teachers as users and the responses of students. Meanwhile, data collection techniques were carried out by interviewing teachers and students, observing teaching materials, and giving questionnaires/instruments to validators and students. Data analysis techniques on the results of data collection were carried out qualitatively and quantitatively. Data in the form of suggestions and input were analyzed using qualitative analysis techniques. Data validity questionnaire results from material experts and media experts were analyzed using quantitative analysis techniques using a Likert scale which has 4 descriptors (1,2,3,4) that have their respective evaluation criteria. The data obtained is then processed by accumulating total scores from material experts and media experts. According to Akbar [8], the validation data processing the form of a percentage can then be interpreted as in the uses the following formula. The results of calculations in following criteria categorization table of validation results.

$$Vah = \frac{Tse}{Tsh} \times 100 \% \tag{1}$$

**Table 2.** Criteria for Categorization of Practicality Results

Achievement rate (%)	Category	Test Decision Category
76 ≤ P ≤ 100	Very practical	Can be used without revision
51 ≤ P ≤ 75	Practical	Can be used, but needs minor revisions
26 ≤ P ≤ 50	Not practical	May be used with major revision
0 ≤ P ≤ 25	Not practical	Cannot be used

Information:

Vah = expert validation

Tse = Total empirical score achieved

Tsh = Total expected empirical score

The results of the product assessment determine whether the product can be used or not.

Based on the categorization criteria in table 1, LKPD can be said to be valid if the percentage reaches at least 70%. If the percentage is below 70%, it is necessary to make a major revision of the LKPD by taking into account the advice of the material experts and media experts.

The final analysis is the analysis of the practicality questionnaire data of teachers and students conducted using the Guttman scale, to obtain firm answers about the practicality of the LKPD. The Guttman scale in this study measures practicality with the choice of a firm answer that is 'yes-no'. The answer 'yes' gets a value of 1, while the answer 'no' gets 0. The results of the questionnaire can be analyzed using the formula from Yamasari (in Santoso, 2016) as follows.

$$P = \frac{Xi}{Xmax} \times 100\% \tag{2}$$

Information:

P = Percentage score

Xi = Number of scores selected

Xmax = Maximum number of scores

From the results of the analysis above, conclusions can be drawn regarding the practicality of teachers and students on guided inquiry-based LKPD products based on the interpretation criteria in table 2.

### 3. RESULT

#### 3.1. Analyze

The first stage was the analysis carried out by interviewing Ms. Yuli Ismiati, S.Pd., SD as the class

teacher and teacher of the fourth-grade mathematics subject at SDN Banggle 02 Blitar Regency on December 14, 2019. From the results of the interview, learning mathematics, flat waking had been using the discovery model to find the area of a flat shape. However, in practice, students still experience communication problems with the teacher so that the teacher uses the lecture method to inform the material of the flat shape directly.

In mathematics learning, the teaching materials used are textbooks in which there are materials, student LKPDs, and question exercises. Based on the interviews and observations of teaching materials, several strengths and weaknesses of teaching materials were found. The strengths of the teaching materials used in schools are: (1) it has a fairly attractive appearance and content, (2) the size and type of letters are easy to read, (3) the spacing between words and sentences is not too tight, (4) the pictures presented is clear, and (5) the language used is easy to apply. However, the textbooks that have been used so far also have weaknesses, namely: (1) less attractive fonts, (2) more dominated by material and question exercises, (3) there is a lack of LKPD in flat shape material that invites students to find facts and concepts related to flat shape material, and (4) the book package used has not filled the space of students to solve the problems presented. For example, there is a LKPD to invite students to find the properties of rectangular and rectangular shapes, but right at the bottom of the LKPD there are answers related to the properties of square and rectangular shapes. So that it does not train students to think creatively.

Also, based on the results of interviews with students that in learning mathematics, students still find it difficult to get up flat. The difficulty is the application of the formula to get up flat in the solution of story problems.

So, they say there is a need for guidance and direction in learning mathematics.

Next, analyze the curriculum and KI and KD. The curriculum used at SDN Banggle 02 is the 2013 curriculum. Basic competence in mathematics learning in class IV flat build material based on Permendikbud No. 37 of 2018.

Next, analyze the character of students. The character of the students at SDN Banggle 02 is quite curious. At the time of learning, they like to ask questions and are active at the beginning of learning. However, if you feel bored learners play like marbles or chat with their peers.

After the analysis activities are carried out, the results of the analysis are then evaluated with the supervisor. Whether the data found is enough or not. The results of the evaluation are the incomplete analysis of needs related to the weaknesses and strengths of grade IV mathematics teaching materials used in schools. Therefore, it is necessary to return to SDN Banggle 02 to observe the teaching material for grade IV mathematics in the school.

**3.2. Design**

At this stage is making a draft LKPD developed. LKPD is designed to consist of 2 types of LKPD namely LKPD properties of flat build and LKPD around and flat build area. The first thing to do is to make the learning objectives and activity scenarios in the LKPD according to the guided inquiry learning model. The translation is as follows.

**Table 3.** Learning Objectives of LKPD Flat Build Characteristics

<b>Learning Objectives</b>
<ol style="list-style-type: none"> <li>1. By observing an object, students can correctly state the shape of the object's build.</li> <li>2. By reading the text, students can tell examples of daily life problems related to getting up properly.</li> <li>3. By observing the shape of the flat figure, students can find facts related to the flat figure by thinking creatively.</li> <li>4. By linking facts related to flat figure that has been obtained, students can analyze the properties of flat figure with creative thinking.</li> <li>5. After identifying the properties of flat shape, students can write the identification results on the sheet that has been provided appropriately.</li> <li>6. By standing in front of the class, students can clearly communicate the characteristics of a flat shape that has been found in front of the class.</li> </ol>

**Table 4.** Learning Objectives of LKPD Around and Flat Build Area

<b>Learning Objectives</b>
<ol style="list-style-type: none"> <li>1. By carrying out the activities of finding the formula around the flat shape, students can explain the concept of the circumference of a square, rectangle, and triangle with creative thinking.</li> <li>2. By carrying out the activities of finding the formula area of flat shape, students can explain the concept of the area of a square, rectangle, and triangle precisely.</li> <li>3. After students find the formula for circumference and area of flat shape, students can solve problems related to the circumference and area of rectangles, rectangles, and triangles correctly.</li> </ol>

Then, compile an outline of the LKPD in the form of material selection and questions that are tailored to the characteristics of students. In addition, in this stage, validation instruments are designed for material experts, media experts, and user experts as well as student response questionnaires. Researchers prepare what aspects will be assessed for the product.



Figure 1 Cover LKPD Traits of Flat Build.



Figure 2 Cover LKPD Around and Flat Build Area.

Material experts assess student LKPD products with aspects of assessment related to material suitability, presentation techniques, guided inquiry models in student LKPD, and creative thinking characters. Media experts assess LKPD products with a neat assessment related to the physical LKPD, the appearance of the LKPD, the feasibility of language, and the systematics of the LKPD. Meanwhile, the assessment aspect for user experts is a combination of the aspects of the evaluation of material experts and media experts. The next stage is to create a LKPD cover design and template using the Canva application.

### 3.3. Development

In the third stage, namely development. Development of LKPD using Ms. application. Word. The development of LKPD lasts for 16 days. This is quite a long time because the activities of searching and gathering all

sources/references, making supporting tables, searching and making illustrated images, typing, and layout settings require patience and accuracy. After LKPD is finished, LKPD is consulted with the supervisor. Suggestions and input from the supervisor include related to the cover, the contents of LKPD material, LKPD template to make it more interesting for students, to be careful in typing, the preparation of sentences should be effective, and better practice using question matter. From the suggestions and input, the researcher made a product revision. Furthermore, the validation of LKPD products based on a guided inquiry conducted by the validator is a material expert and media expert. The validation results are as follows. The suggestions and input from the validator are shown in Table 7.

Table 5. Percentage of Expert Validation Results

No.	Validator	Percentage	Category
1	Material expert	95,3%	Very valid
2	Media expert	100%	Very valid

Table 6. Percentage of Product Practicality Test Results

No.	Validator	Percentage	Category
1	Limited trials	97,78 %	Very practical
2	Field trials	100%	Very practical
3	Users (teacher)	100%	Very practical

Thus, the input and suggestions from the validator. These inputs and suggestions are then followed up by improving LKPD products. So, the LKPD products developed are even better. In addition to testing the validity, the teacher as the user also tests the practicality of the product. The results of practicality tests conducted by teachers obtained a percentage of 100%. So that if interpreted based on the criteria for categorizing practical results according to Yamasari (in Santoso, [9]), they are in the range of  $76 \leq P \leq 100$  with very practical criteria, and products can be used in learning.

### 3.4. Implementation

After the product is validated and improved based on the advice or input of material experts and media experts. the next stage is the implementation of LKPD products based on guided inquiry flat build material on the test subjects, namely class IV students. At this stage, the results of research and development are obtained from the results of limited trials and field trials. In testing this product aims to determine the practicality of guided inquiry-based LKPD from users, namely teachers and students.

**Table 7.** Validator Suggestions and Input

Validator	Suggestions and Input
Material expert	<ul style="list-style-type: none"> <li>- Strive for reading and contextual questions</li> <li>- Before working on practice questions, it is better to give examples of questions and give an explanation of which ones are known, who are asked, how to answer them, and the conclusions from working on the questions.</li> </ul>
Media expert	<ul style="list-style-type: none"> <li>- At the beginning of each sub-chapter, the points letter A, B, C and so on protrude to the right</li> <li>- The color of the cover is even brighter</li> <li>- The decoration that doesn't need to be removed</li> </ul>

**3.5. Evaluation**

Evaluation is a process to find out whether guided inquiry-based LKPDs are developed or not. Evaluations occur at each stage of the ADDIE model. Evaluation is also done after the students use the LKPD based on guided inquiry flat build material. Evaluation is carried out to find out how much knowledge is received by students after using guided inquiry LKPD based on flat figure material. The following are data from the results of evaluation questions that have been done by students both in limited trials and field trials.

**Table 8.** Evaluation Results of Limited Trial and Field Trial of LKPD Flat Building Properties

Result	Limited Trial	Field Trial
Average	76,67	82,5
Minimum	60	70
Maximum	100	100

Based on table 8, it can be concluded that the average results of the evaluation of LKPD based on guided inquiry material on the properties of flat build in limited trials and field trials exceeded the KKM grade IV math content determined by schools which is 70. However, the minimum value on the test Limited trials have not met the KKM in contrast to field trials whose minimum values have met the KKM.

**Table 9.** Evaluation Results of the Limited Trial and Field Trial of LKPD Around and Flat Build Area

Result	Limited Trial	Field Trial
Average	70	76,87
Minimum	60	60
Maximum	80	85

Based on table 9, it can be concluded that the average results of the evaluation of LKPD based on guided inquiry-based on traveling material and flat area in limited trials and field trials meet the KKM grade IV math content determined by schools, which is 70. However, the minimum value obtained learners in each trial have not met the KKM determined at school. Furthermore, in the research and development carried out there were revisions in the LKPD products based on

guided inquiry flat wake material after being evaluated. The need for revision because it gets advice and enters it after the product is consulted with the supervisor, the product is validated by the validator and, the product is tested on grade IV students.

**4. DISCUSSION**

The response to the existence of guided inquiry LKPD products based on grade IV flat material was very positive. The fourth-grade students of SDN Banggle 02, Blitar Regency with a total of 24 children are very interested in carrying out the activity of finding the concept of flat building material in LKPD. The activity of making flat shapes from folding paper, cutting, sticking, and measuring is done carefully and vigorously. Students also feel happy because the guidance and direction in learning mathematics using LKPD based on guided inquiry flat build material still exists. This is in line with the understanding of guided inquiry learning according to Fathurrohman (2015: 106), which is an inquiry learning model in which the teacher provides guidance or instructions quite broadly to students. Thus, the concept of discovery activities in LKPD can achieve learning objectives, but still, be centered on students.

One of the aims of this research and development is to produce LKPD based on guided inquiry flat-build material to train the creative thinking skills of grade IV students based on valid material experts and media experts. Based on the calculation of the results of the validation of the material using analytical techniques according to Akbar [8], it produces a validity level of 95.3%. So, it can be said that the LKPD based on guided inquiry grade IV flat material is very valid and can be used. The results of the validation of this material are already quite good because previously, Wahyu & Madlazim [10], developed LKPD based on guided inquiry in class X SMA only got a percentage of content validity of 73% from material experts.

However, to improve the LKPD it needs a little improvement by the advice given by the material experts. Material expert, I advise the form of reading and practice questions on LKPD should be contextual. This is by the opinion of Widarti [11], that contextual problem-solving activities can help students know the relationship of various concepts in mathematics and apply mathematics

in everyday life. Besides, the material expert II also suggested that before working on the practice questions in LKPD, it is better to give examples of questions and give explanations regarding which ones are known, asked questions, how to answer them, and conclusions from working on the questions. The existence of ways to answer like that can facilitate students in understanding the purpose of the story given to the LKPD. So, the existence of LKPD can help teachers in training students to solve problems, especially a matter of stories. This is in line with the opinion of Azmi, et al. [12], that the student activity sheet (LKPD) is one of the means to help and facilitate teaching and learning activities so that effective interactions will be formed between students and educators and also increase the activities of students in increased learning achievement.

Furthermore, based on the calculation results of ahi media validation using analytical techniques according to Akbar [8], it produces a validity level of 100%. So, it can be said that the LKPD based on guided inquiry grade IV flat material is very valid and can be used. However, to improve the LKPD, it needs a little improvement according to the advice given by media experts. Media experts provide suggestions for improving the layout of the points A, B, C, and so on in each sub-chapter so that it is arranged more protruding to the right. This is because when LKPD is laminated, the letter points in each sub-chapter can still be easily seen by students. This is consistent with the opinion of Diniaty & Atun [13], that LKPD should meet technical requirements, namely emphasizing the presentation of LKPD which includes writing, drawing, and good appearance. So that teachers and students do not experience difficulties because the appearance of LKPD makes it easier to use. Media experts also suggest the colors on the LKPD cover flatness are more enlightened so that the LKPD display is more attractive to students in learning to use LKPD based on guided inquiry flat build material. Besides, the unnecessary decoration should just be removed so that students focus more on the contents of the LKPD. Because of the function of LKPD according to Prastowo [14], one of them is helping teachers in teaching. So that the improvement in terms of appearance LKPD is very necessary.

Product trials are carried out twice, namely limited trials and field trials. Limited trials (small groups) were conducted in class IV SDN Bendo 2. While field trials were carried out in class IV SDN Banggle 02. Limited trials were conducted to determine deficiencies or obstacles when the product was tested before the field trial. The results of the limited trial evaluation stated that the practicality level of the LKPD product based on guided inquiry in mathematics material was 97.78%. This means that when interpreted into the range of  $76 \leq P \leq 100$ , it is stated that the product is very practical, and can be used without revision.

Field trials were conducted after guided inquiry LKPD products based on flat material experienced improvement after limited trials. The results of the field trial assessment stated the practicality level of LKPD products based on guided inquiry mathematics material was 100%. This means that when interpreted into the range of  $76 \leq P \leq 100$ , it is stated that the product is very practical, and can be used without revision. Based on the results of field trials, it was found that by using guided inquiry LKPD based on grade IV flat material, students can practice their creative thinking skills, this is evidenced that the results of the questionnaire responses of students showed students were able to do the questions or tasks in LKPD. Besides, students get several choices on how to solve problems in this LKPD. This means that students can choose for themselves how to solve problems in LKPD because some of the story problems in LKPD present the possibility of solving answers to more than 2 answers. Students are also given the freedom to use which formulas they find easy to use. This fulfills the indicators of creative thinking from Suhandoyo [15], that the ability to think creatively has three indicators, namely (1) Fluency is an indicator of creative thinking that explains the ability of students to solve problems by showing one way to correct resolution, (2) flexibility is the ability of students to solve problems by showing several different ways of solving them, and (3) novelty is the ability of students to solve problems by showing ways that are not commonly used by other students.

The use of the guided inquiry model as a reference in the development of LKPD flat figure material has been quite successful in practicing the creative thinking skills of grade IV students. Because the stages in the guided inquiry model lead students to learn to find a concept by solving the given problem. Besides, the guided inquiry is part of the inquiry learning model. So, this is in line with the opinion of Fathurrohman (2015:105), that the inquiry model provides students with a variety of concrete experiences and active learning that encourages, provides space, and opportunities for students to take the initiative in developing problem-solving skills, decision making, and research to enable them to become creative thinkers. This can also be proven from the average results of the evaluation questions that have been done by students in grade IV SDN Banggle 02 whose results have met the KKM determined by the school. This is consistent with the research of Indriani, et al. [16] and research by Marsitin & Fayeldi [17], who both developed LKPD based on guided inquiry with the average student test results above the KKM with very good test results category. In addition, Yasin et al. [18] in their research stated that guided inquiry based LKPD was able to increase students' critical thinking. Thus, the guided inquiry model is very suitable for training students' creative thinking skills.

LKPD based on guided inquiry flat build material has several advantages, namely presenting concept discovery

activities that can help students understand the material, train students' communication skills because LKPD is done in groups and there are guidance and direction by the teacher, develop fine motor skills of students because in LKPD activities are measuring, cutting, sticking, and drawing and training students to collaborate and become peer tutors because LKPD discovery activities are carried out in groups. Besides, guided inquiry LKPD based on flat construction material has the advantage of practicing creative thinking skills. This is by the research of Wahyu & Madlazim [10] that, LKPD based on guided inquiry is feasible to be used to improve students' creative thinking skills.

Besides having advantages, of course, a product has weaknesses. The weaknesses of guided inquiry LKPD based on flat construction material, namely the stages of LKPD activities which are almost the same and always in sequence in each sub-chapter, causing students to easily feel bored. This is based on the opinion of Maniotes & Kuhlthau [19], the stages in the guided inquiry learning model should be done in order. Besides, the weakness of this LKPD product is that if there are differences in the ability to measure different students, it will become an obstacle in the learning process, because of the accuracy in measuring students' influences in concluding, especially the properties of flat shapes.

## 5. CONCLUSION

Based on the results of the research and discussion, it can be concluded that this research and development resulted in a product in the form of a guided inquiry-based student LKPD of class IV material that is valid and practical at SDN Banggle 02, Blitar Regency. Based on the validation of material experts, it can be seen that the validity of the material is 95.3%, so it can be categorized as very valid. Based on the validation of media experts, it can be seen that the media validity is 100% which is very valid. While user validation, it can be seen that the validity of the user (teacher) is 100%, so it can be categorized as very valid. Of the three percentages obtained, the product can be used without revision. Even though it is considered valid, suggestions and input from the validator are still carried out in order to get a better product. According to the results of the practicality questionnaire obtained from the teacher was 100% and the response of students which included limited trials and field trials got an average result of 96.67% which entered the criteria very practical so that the product could be used in learning.

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