

DEVELOPMENT OF PESETA DIDIK WORKSHEET (LKPD) IN THE FORM OF LEAFLEAT WITH A GROUP INVESTIGATION MODEL IN SCIENCE SUBJECTS IN CLASS V YPI NUR FADHILLAH

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Abstract

This research aims to develop a product in the form of Student Worksheets (LKPD) in the form of leaflets for science subjects in class V YPI Nur Fadhilah. LKPD is adjusted and arranged according to the steps in the group investigation learning model in the form of a leaflet which contains identification of topics in the form of material summaries, investigations in the form of questions and practicum on heat material and changes in the shape of objects. LKPD development is carried out using the R&D (Reserch & Development) research method, the ADDIE model which consists of 5 stages, namely Analysis, Design, Development, Implementation, Evaluation. However, researchers limit the Evaluation stage (evaluation). This is due to limited time, effort and cost. The results of the feasibility of the leafet form LKPD obtained were very good overall. Material expert validation assessment is 95% with a very valid category. The results of the design expert validation assessment were 92% with a very valid category. And the results of the linguist validation assessment are 90% with a very valid category. The results of the practicality assessment by the teacher were 98.67% with very practical criteria and the results of the practicality assessment by students were 92% in the very practical category, so that LKPD was suitable for use in Elementary Schools (SD).

Keywords: LKPD IPA in the form of leaflets, Group investigation, Students.

1. INTRODUCTION

This study aims to describe the problematic state of the use of science learning in grade V at Attaufiq private elementary school in Medan Tembung District, Indra Kasih Village, as it is. Based on this objective, the researcher uses a descriptive qualitative research method. The researcher conducted a survey and distributed a questionnaire to the research subjects. The population of this study was taken from all students in grade V with a total of 20 people.

The data collection technique used is a questionnaire. In this study, the researcher observes and observes problems or problems for students in science learning. According to Pane and Dasopang (2017), learning is a system that involves a unit of components that are interrelated and interact with each other to achieve an expected result optimally in accordance with the goals that have been set. According to Fakhurrizi (2018), learning is an activity carried out by teachers in such a way, so that student behavior changes for the better.

From the opinion of the experts

above, it can be concluded that the education system is certainly related to the learning process, so that the learning process can change the behavior of students for the better, which involves interaction between students with guidance or direction from the teacher. Learning activities must be packaged attractively so that students can easily accept them, so that students will be more active and enthusiastic in participating in learning.

However, the fact is that learning activities do not fully run well, the lack of teachers' ability to manage the classroom makes students tend to learn in a conventional way, only listening to the teacher's explanations, working on problems, then the learning is finished, the absence of learning that is packaged attractively makes students not get new learning experiences.

Then conventional learning activities also make a decrease in students' activity and learning response in participating in learning activities, so that many students do not understand the material that has been delivered. According to Kanza, et al. (2020) student learning activity is a process of teaching and learning activities that require

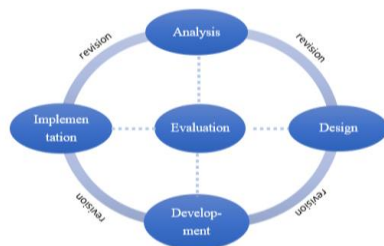
students to be actively involved in the learning process and make student behavior better. So it can be said that the student's learning activity is very important so that the student is able to understand and study the lessons that have been given.

Therefore, the purpose of this study is that the researcher hopes that there will be an increase in learning activity and enthusiasm of students through the development of LKPD (Student Worksheets) in the form of leaflets that are made, then another goal is to provide an interesting learning experience for students, namely by using the Group Investigation model in science subjects so that students are more active in the learning process in the classroom.

Thus, based on these problems, the research carried out is to carry out the Development of Student Worksheets (LKPD) in the form of Leaflets with a Group Investigation Model in Science Subjects in Class V YPI Nur Fadhillah".

2. RESEARCH METHODS

The type of research used in this study is R&D (Research and Development) and the development model in this study uses ADDIE, where ADDIE stands for Analysis, Design, Development, Implementation, Evaluation. However, in this study, the researcher limited the research to the implementation stage. This is due to limited time, energy, and cost.



Here are the four steps of the ADDIE development model in detail:

- **Analysis**

At this stage, the researcher analyzes the data that will later be used in developing a product to be produced. The problems that arise and occur are because existing products are less relevant and need to be updated to overcome problems in the educational environment that will be the target of research.

- **Design**

In the development of ADDIE, design activities are carried out by designing the

shape and structure of the product to be produced. The design is written for each product so that the manufacturing is more optimal which is clearly described. At the design stage, it is only conceptual.

- **Development**

At this stage, ADDIE's research and development contains product design realization activities, where the design that has been made previously is then applied into a framework that is ready to be tested. Then validate the product that has been developed to see if the product is worth testing or needs to be revised first.

- **Implementation**

At this stage, ADDIE's development research contains activities to prepare for product trials that have been validated by expert validators, by preparing for the implementation of learning with products that have been developed and models that have been selected previously. The research was carried out in the even semester of the 2022/2023 academic year, between February and April 2023.

1. Population

According to Sudarmayanti and Hidayat in Hidayat and Junianto (2017), population is the totality or totality of psychological objects that are limited by certain criteria. Where the population is determined by the researcher to be able to be used as an object in the research that will be carried out later. The population of this study is all students of class V YPI Nur Fadhillahh for the 2022/2023 school year consisting of 4 classes totaling 146 people.

2. Sample

According to Sedarmayanti and Hidayat in Hidayat and Junianto, (2017) the sample is a small group that is observed and is part of the population so that the traits and characteristics of the population are also owned by the sample. The sample is considered as part of the object to be studied as a representative of the entire population, in this sample in the VC class of YPI Nur Fadhillah there are 37 students consisting of 17 women and 20 men as the object of research to be carried out.

The following are the data collection techniques used in research activities, namely:

- 1) The validity test of LKPD in the form of a leaflet with a group investigation model is carried out by making a validation questionnaire instrument that is given to

expert validators, namely material experts, design experts and linguists to validate whether the product is suitable for use or must be revised first before the trial is carried out. Validators only provide a check mark (✓) on the assessment score that has been provided and give suggestions and comments on the validation questionnaire.

- 2) The practicality test of the leaflet form of LKPD with the group investigation model was carried out by providing a practicality questionnaire to the homeroom teacher and students after conducting a trial in the classroom, to see whether the leaflet form of the LKPD with the group investigation model was used or not.

The data analysis techniques in development are qualitative and quantitative, in qualitative data seen through suggestions, responses and criticism from supervisors, expert lecturers as well as teachers and students. Meanwhile, quantitative data is in the form of obtaining numbers generated from the validation scores of experts and practicality scores by teachers and students, which are used as a measure of the effectiveness of the products that have been produced.

- 3) LKPD Validation Data Analysis

The validation test in the development of LKPD is carried out by looking at the score given by each expert validator on a questionnaire that has been set as a reference for the validity of the product produced.

The formula used in the data analysis in this development is as follows:

$$P = \frac{f}{N} \times 100$$

Information:

P = Validity percentage

f = Number of scores obtained

N = Maximum score

If the percentage of products reaches 81.00%-100.00%, the product produced is valid and does not need to be revised.

- 1) LKPD Practicality Analysis

Student responses and teacher responses are used as a practicality test where each score obtained is then adjusted to the category of student response and teacher response. The scale used to see the score of

practicality in the use of LKPD, namely by using the Likert scale, the following is a table of provisions:

Information	Skor
Strongly Agree	5
Agree	4
Disagree	3
Disagree	2
Strongly disagree	1

With criteria on the Likert scale with a maximum score of 5 on each indicator assessed on student responses and teacher responses.

So the formula used is as follows:

$$P = \frac{f}{N} \times 100$$

Information:

P = Percentage searched

f = Number of scores obtained

N = max score

3. RESULTS

The results of the research were obtained based on the analysis of data on the validity of LKDP products and the practicality of LKPD products.

1. The Development Process of LKPD in the Form of a Leaflet with a Group Investigation Model in class V of YPI Nur Fadhillah.

In the development process, the researcher uses the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model. However, the researcher limited this research to the implementation stage. This is due to limited time, energy, and cost. In the early stages of the research, the researcher made observations in the form of interviews with the homeroom teacher of class V YPI Nur Fadhillah, from the results of the interview conducted by the homeroom teacher admitted that learning activities were still quite monotonous and centered only on the teacher. then there is still a lack of use of LKPD to teach students' skills and activeness so that science learning becomes less interesting and meaningful learning, because learning is only based on theory and not direct practice. Based on the interviews that have been conducted, the researcher wants to innovate the LKPD not only the content but the shape of the LKPD which usually consists of sheets of paper, now it is only enough in the form of a leaflet so that it

is more practical and the design of the LKPD is also arranged with more attractive colors and pictures so that students can easily understand it. The content of the material from the LKPD that was developed was heat and changes in the form of objects, which then contained several group activities in the form of practicum to increase students' learning activity and provide a new learning experience at YPI Nur Fadhillah.

The next stage is that the researcher provides innovation in the form of LKPD which is designed in the form of a leaflet in science learning in class V. At the design stage, the researcher uses the canva.com website as a template to compile the LKPD so that it is interesting and associated with the steps in the group investigation model. After completing the design and then printing it with A4 paper size, it is hoped that the development of this product can provide practicality in teaching and increase students' learning activity.

1. The level of validity of LKPD in the form of a leaflet with a group investigation model.

a. Validation of Material Experts

The development of LKPD in the form of a leaflet with a group investigation model in science subjects has been validated for its feasibility which has been carried out by the material expert validator, namely Mrs. April Deliyanti, S.Pd as the homeroom teacher of VD YPI Nur Fadhillah.

Based on the analysis and assessment of material experts consisting of 3 (Three) aspects including (1) the suitability of the material, (2) the accuracy of the group investigation, (3) the technique of presenting the material, it has been declared good and does not need to be revised. The following are the results of the assessment by the material expert validator on the LKPD product in the form of a leaflet in each aspect.

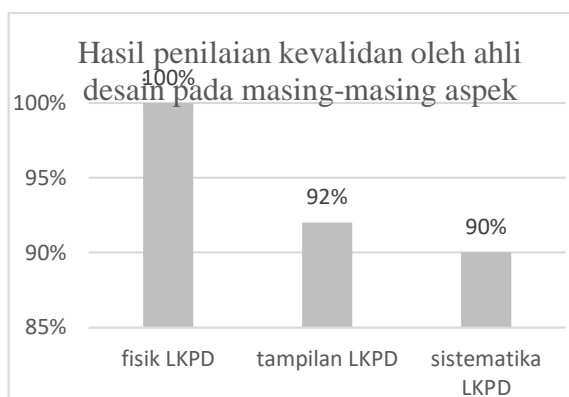


The assessment of LKPD products from material experts in each of these aspects obtained an average feasibility percentage of 95% where according to Wahyudin and Permatasari (2017), the value of 81.00% - 100% was declared very valid, and the percentage was 95% according to the criteria so that the LKPD products that have been developed are in accordance with the material so that they are suitable for use in the learning process IPA.

a. Validation of Design Experts

The development of LKPD in the form of a leaflet with a group investigation model model in science subjects has been validated for its feasibility which has been carried out by a validator of design experts, namely Mr. Dr. Faisal Rahman Dongoran, M.Si, as a lecturer at the University of Muhammadiyah North Sumatra

Based on the analysis and assessment from material experts consisting of 3 (Three) aspects including (1) the physical LKPD, (2) the appearance of the LKPD, (3) the systematics of the LKPD, it has been declared good and no revision is needed. The following are the results of the assessment by the design expert validator on the LKPD product in the form of leaflets in each aspect.

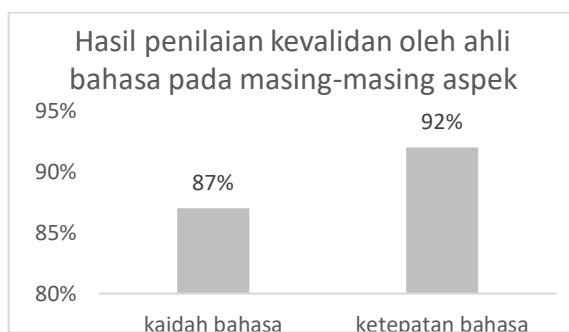


The assessment of LKPD products from material experts in each of these aspects obtained an average feasibility percentage of 92% according to Wahyudin and Permatasari (2017), a value of 81.00% - 100% was declared very valid, and a percentage of 92% according to the criteria so that the LKPD products that have been developed are suitable for use in the learning process IPA.

a. Linguist Validation

The development of LKPD in the form of a leaflet with a group investigation model in science subjects has been validated for its feasibility which has been carried out by linguist validators, namely Mr. Dr. Charles Butar-Butar, M.Pd, as a lecturer at the University of Muhammadiyah North Sumatra

Based on the analysis and assessment of material experts consisting of 2 (Two) aspects including (1) language rules, (2) language stipulations, it has been declared good and no revision is needed. The following are the results of the assessment by the design expert validator on the LKPD product in the form of leaflets in each aspect.



The assessment of LKPD products from material experts in each of these aspects obtained an average feasibility percentage of 90% where according to

Wahyudin and Permatasari (2017), the value of 81.00% - 100% was declared very valid, and the percentage was 90% according to the criteria so that the LKPD products that have been developed are suitable for use in the science learning process.

The interpretation of the expert validation level is as follows:

Validation Aspects	Percentage earned	Interpretation
Materi	95%	Sangat Valid
Desain	92%	Sangat Valid
Bahasa	90%	Sangat Valid

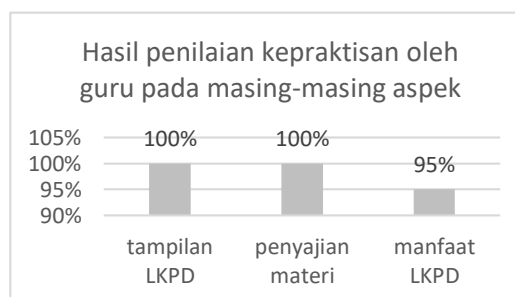
Thus, the LKPD in the form of a leaflet with a group investigation model is declared valid and can be used in elementary schools (SD).

1. The level of practicality of the LKPD in the form of a leaflet with a group investigation model.

a. Practicality Test by Teachers

The practicality test for the VC class teacher YPI Nur Fadhilah began by explaining how to use the LKPD product in the form of a leaflet that has been developed, then the researcher asked the teacher to assess and give suggestions and comments about the LKPD.

Based on the analysis and assessment that has been carried out by teachers on LKPD products in the form of leaflets with a group investigation model in science subjects in class V, the product is attractive and suitable for use. The 3 (Three) aspects of the practicality test are, (1) the appearance of the LKPD, (2) the presentation of the material, (3) the benefits of the LKPD. Based on the assessment by the teacher on each aspect.

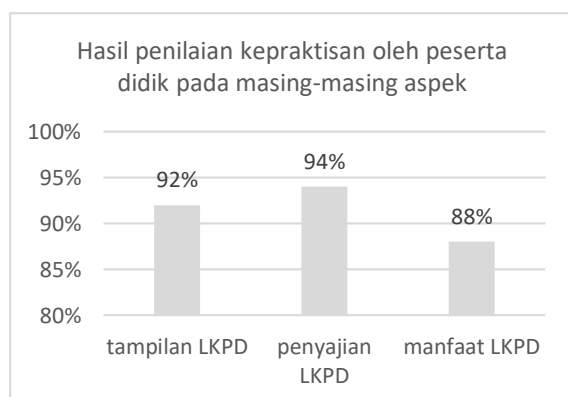


Based on the results of the assessment of LKPD products carried out by teachers in each of these aspects, an average percentage of feasibility of 98.67% was

obtained which was declared very valid so that the LKPD products that have been developed are suitable for use in the science learning process in grade V of elementary school.

a. Practicality Test by Students

The practicality test was carried out on 33 students of the VC class YPI Nur Fadhillah, students who had used the LKPD in the form of leaflets in the learning process were asked to fill out the questionnaire that had been given by the researcher. The assessment consists of 3 (Three) aspects which include (1) the appearance of LKPD, (2) the presentation of LKPD materials, (3) the use of LKPD. In this practicality test, the researcher began with the researcher giving an explanation to the students how to fill out the questionnaire, then the students were asked to assess the LKPD in the form of a leaflet with a group investigation model, in science subjects, heat materials and changes in the form of objects. The following are the results of the assessment of 33 students in each aspect.



Based on the analysis of the assessment of 33 students on the LKPD product in the form of a leaflet with a group investigation model by providing each response questionnaire, the average percentage of eligibility is 92% which is declared very valid so that the LKPD product that has been developed is suitable to be used in the science learning process in grade V of elementary school.

Adapun interpretasi kepraktisan LKPD sebagai berikut :

Response	Percentage obtained	Interpretation
Teacher	98,67%	Valid
Learners	92%	Valid

Thus, the LKPD in the form of a leaflet with a group investigation model is

practically used and can be applied to science subjects in elementary schools (SD).

4. CONCLUSION

Based on the results of research and development of LKPD in the form of a leaflet with a group investigation model in science subjects in class V, the following conclusions were obtained:

1. LKPD in the form of a leaflet with the group investigation model developed obtained the results of validation by material experts with a percentage of 95% with the criteria of "very valid and can be used without revision", then the validation results from design experts obtained a percentage of 92% with the criterion of "very valid and can be used without revision", and the results of linguists obtained a percentage of 90% with the criterion of "very valid and can be used without revision". Therefore, it can be concluded that the results of the three expert validators said that the product is "Very Valid" so that the LKPD in the form of a leaflet with a group investigation model is suitable for use in elementary schools (SD).
2. The results of the practicality of using LKPD in the form of leaflets with a group investigation model, namely by looking at the results of the responses of teachers and students regarding the use of LKPD. For the teacher's response, the percentage of grades obtained was 98.67% included in the category of "very practical" and for the response The average percentage of students obtained was 92% "practical sa. ngat practical". Therefore, from the results of the response of teachers and students to practicality, it can be said to be "Very Practical".
3. From the results of the research that has been carried out by developing LKPD in the form of a leaflet with a group investigation model, the LKPD is feasible to use and can be developed as an innovative teaching material in science subjects in grade V of elementary school.

REFERENCES

- Fakhrurrazi. (2018). Hakikat Pembelajaran Yang Efektif. *At-Tafkir*, 11(1), 85–99.
- Hidayat, A. R., & Junianto, E. (2017). Pengaruh Gadget Terhadap Prestasi Siswa SMK Yayasan Islam Tasikmalaya. *Jurnal Informatika*, 4(2), 163–173.
- Muliyantini, P., & Parmiti, D. P. (2017). Penerapan Model Pembelajaran Group Investigation (Gi) Untuk Meningkatkan Hasil Belajar IPA Kelas V. *Jurnal Ilmiah Sekolah Dasar*, 1(2), 91.
- Pane, A., & Darwis Dasopang, M. (2017). Belajar Dan Pembelajaran. *FITRAH: Jurnal Kajian Ilmu-Ilmu Keislaman*, 3(2), 333.