

STUDENT WORKSHEETS BASED LIVEWORKSHEETS DISCOVERY LEARNING MODEL IN THEMATIC TEACHING IN ELEMENTARY SCHOOL

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ABSTRACT

This study aims to develop appropriate Student Worksheets with current technological developments that have not been used optimally in thematic learning in elementary schools, as well as for the realization of meaningful learning. This type of research is development research with research and development (R&D) methods. This study uses a 4-D (four-D) namely the stages of defining, designing, developing, disseminating and evaluating. The subjects of this research trial were the fourth grade students of elementary school 10 Lubuk Begalung, totaling 27 people to determine the practicality of the products developed. The result of this research is a product in the form of student worksheet using Liveworksheets based on Discovery Learning for fourth grade elementary school students. The results of the analysis of the material validation instrument were 88.8%, linguistic validation was 90%, and media validation was 92.70%, so the worksheet developed was categorized as very valid. The practicality level of student worksheet from teachers is 97.14% (very practical) and the practicality level of student worksheet by students reaches a practicality value of 92.86% (very practical).

Keywords: Student Worksheets, Liveworksheets, DL

1. INTRODUCTION

Technology-based worksheets have an important role in learning, which can provide convenience for both teachers and students. According to (Nurhidayati, 2019) technology-based LKPD aims to provide convenience for teachers and students. Teachers can be helped in providing understanding of the material to students and students using technology-based worksheets can provide more active learning and can have an independent and responsible attitude.

One of the technologies that can be used to create Worksheets is liveworksheets. According to (Prasetya, 2021) with live worksheets, teachers can design interactive worksheets that can be accessed easily, in live worksheets teachers can make their own interactive worksheets or use existing worksheets. Student worksheets are one of the learning resources contained in integrated thematic learning.

From the preliminary study, it is explained that the two schools have used the 2013 curriculum. All three schools have internet facilities, namely Wi-fi and computers. In addition, researchers also found problems in integrated thematic learning related to student worksheet, namely, (1) teachers still use conventional LKPD in the form of printed sheets that are done by students who spend a lot of time so that the use of LKPD becomes less effective (2) not yet develop student worksheet that utilizes technology, (3) The material is presented briefly

without detailed explanations or structured steps in finding the basic concepts. The results of the observation questionnaire conducted to students of elementary school 10 Lubuk Begalung and elementary school 22 Lubuk Begalung showed that students in both schools had not used technology-based worksheets and students were more interested in questions accompanied by colors, videos, and interesting pictures. A similar problem states that the use of interactive multimedia in social science lessons in elementary school is still less to be available (Miaz et al., 2018).

The problems found in the field related to the use of student worksheet are very complex and require solutions. If this is allowed, it will have an impact on the meaning of learning for students. This has also resulted in a decline in the quality and learning outcomes of students. It is very urgent to develop student worksheet that is integrated with technology, namely student worksheet based on Liveworksheets.

2. LITERATURE REVIEW

2.1 Student Worksheets

Student worksheet is a student guide used to carry out research or solving activities problem. Student worksheets contain a set of activities fundamental things that must be done by students to maximize understanding in efforts to build basic abilities according to indicators achievement of learning outcomes that must be taken (Trianto, 2011).

In line with this opinion, (Prastowo, 2014) said that LKPD is a printed teaching material in the form of sheets paper containing material, summary, and implementation instructions learning tasks that must be done by students, which refers to the basic competencies that must be achieved.

2.2 Liveworksheets

According to Andriyani, et al (2020) Liveworksheets applications are: an application provided free by the Google search engine. This application allows teachers to change traditional worksheets printable (pdf, jpg, or PNG) into interactive online exercises at the same time automatically corrects. Students can work on worksheets online and send their answers to teachers as well online.

Liveworksheets is an online platform that allows we convert conventional/traditional worksheets into worksheets interactive online students with automatic corrections and grades (Asfar et al. 2021).

The advantages of this application are good for students because it is interactive and easy to use motivating, for teachers this app saves time and for save paper (Andriyani, et al. 2020).

2.3 Discovery Learning

According to (Widyastuti 2014) Discovery Learning is a learning based on discovery (inquiry based), constructivist and theory of how to learn. The learning model given to students have learning scenarios to solve real problems and encourage them to solve their own problems.

According to (Reinita, 2020) the Discovery Learning model is a learning model known as discovery learning. Student encouraged to learn on their own by actively participating in learn in class and make students not easily forget the material lesson.

The steps of the Discovery model are: Learning is 1) Stimulation 2) Problem Statement , 3)Data Collection , 4) Data Processing, 5) Verification, 6) Generalization (Fauzi, et al: 2017).

3. METHOD

Type of research used in this research is development research. Research and Development (Research and Development) or commonly abbreviated as R&D. Research and development is a process or steps to develop a new product or improve an existing product, which can be accounted for (Nana, 2016).

Research Procedure Development

research consists of several models, and the model that the researcher uses is the 4-D Thiagarajan model (Sugiyono, 2019), namely define (definition), design (design), development (development) and dissemination (dissemination). This mode was chosen because it is easy to understand and also this model is the right step to use for the development of learning tools. The activities carried out at each stage of development are as follows:

1. Define. The definition stage is useful for determining and defining the needs in the learning process as well as collecting various information related to the product to be developed, namely: (1) Front-end analysis is carried out to find out the basic problems in the learning process in elementary school. ; (2) Learner analysis is done by observing the characteristics of students; (3) Task analysis is carried out to identify the main tasks to be carried out by students that are directly related to the integrated thematic learning curriculum; (4) Concept analysis is carried out to determine the content of the material in the Student Worksheet to be developed; (5) Specifying instructional objectives are carried out to determine indicators of achievement and learning objectives based on material analysis and curriculum analysis.
2. The design is based on the findings obtained during the preliminary study related to: (1) Media Selection in the form of gadgets that use the Liveworksheets web; (2) Format Selection of student worksheet; (3) Initial Design adapted to the Discovery Learning model.
3. Develop / Development. This development stage aims to produce learning tools in the form of

student worksheet using Liveworksheets based on Discovery Learning which has been revised to improve the quality of the student worksheet based on expert input. If the student worksheet developed is not valid, it will be revised. But if the student worksheet developed is valid, then a limited trial is carried out to see the practicality of the student worksheet using Liveworksheets based on Discovery Learning which is valid and can be tested on students in grade IV SD.

4. Dissemination. At this stage, the researchers conducted dissemination in different elementary schools from where the practicality trials were conducted. The goal is to get input, corrections, suggestions, and assessments to improve the final product development so that it can be accepted by product users, both individuals, groups and systems.

4. RESULTS AND DISCUSSION

4.1 Presentation of LKPD Development Trial Data

Using DL-based Live Worksheets using a 4-D development model whose stages are definition, design, development and dissemination. The trial was carried out by material experts, media experts, linguists, teachers and students by conducting a limited trial with a total of 27 students.

The data from the trial using the 4-D model are as follows:

a. Results of the Defining Phase The

Results of the defining phase consist of several analysis results, namely:

- 1) Front-end analysis results. This analysis was carried out by conducting a preliminary study to elementary school 22 Lubuk Begalung and elementary school 10 Lubuk Begalung, District Lubuk Begalung, Padang City. After conducting a preliminary study, the problems that the researchers found were (1) teachers still use conventional student worksheet in the form of printed sheets that are done by students who spend a lot of time so that the use of student worksheet becomes less effective (2) has not developed student worksheet that utilizes technology, (3) The material is presented briefly without being accompanied by detailed explanations or structured steps in finding the basic concepts. This has an impact on students, namely, (1) students are less active in learning, (2) students feel bored during the learning process, (3) students are less critical in solving questions given by the teacher, because they are not given the opportunity think broadly and only rely on the explanations given by the teacher, (4) students do not get direct experience in learning.
- 2) Results of Student Analysis, Student analysis is carried out by observing the characteristics of students and their development process. The results of the student analysis carried out by the researcher were the fourth grade elementary school students, namely, (1) the fourth grade students of SDN 10 Lubuk Begalung totaled 27 people, (2) the age range of the students was around 9-11 years, (3) the students were in a period of rapid cognitive

development, as students begin to learn to form a concept, see relationships, and solve problems in situations involving concrete objects and real situations, (4) students are less interested in the tasks given by the teacher because they are only in the form of writing questions made on the blackboard, which should use student worksheet in the learning process.

3) Results of Task Analysis (Task analysis) The results of the task analysis are obtained from an analysis of Core Competencies, Basic Competencies and analysis of the subject matter.

4) Results of Concept Analysis In concept analysis, the researcher conducted an analysis of Core Competencies and Basic Competencies which was assisted by teacher and student books. The results of the concept analysis contain the main concepts of the thematic learning materials 1 and 2, sub-theme 3 (proud of the area where I live), theme 8 (where I live) which are entered into the LKPD using DL-based live worksheets. Results of Analysis of Learning Objectives Formulation The results of this analysis are in the form of learning objectives contained in the student worksheet using live worksheets based on Discovery Learning, theme 8 (where I live). The learning objectives are as follows: (a) By observing, students can define the relationship of force and motion on events in the surrounding environment correctly; (b) By questioning and answering, students can correctly describe the differences in force and motion in events in the surrounding environment; (c) With assignments, students can show the relationship between force and motion through objects around them correctly; (d) With assignments, students can describe the experimental results about the relationship between force and motion correctly; (e) With teacher instructions, students can describe orally the meaning of fictional texts correctly; (f) With question and answer, students can identify the characteristics contained in fiction texts correctly; (g) With the teacher's instructions, students can analyze the fiction text story Aesop's Goose and the Golden Egg; (h) With assignments, students can correctly identify the figures in the fictional text.

b. Results of the Design Phase

At this design stage, researchers designed Student Worksheets using Live Worksheets based on Discovery Learning. The student worksheet designed is needed to make it easier for teachers to present thematic worksheets in grade IV SD and make students interested and motivated to take part in learning actively. The results of the student worksheet design made by the researcher are as follows: 1) student worksheet Cover Display The student worksheet cover contains the title and identity of students in the form of name, class/semester, and day/date.

Student worksheet display:



c. The results of the Development PhaseAt

The student worksheet that the researchers designed and developed was continued with validation activities by experts according to their field of expertise consisting of 3 expert validators, namely material experts, linguists and media experts. Based on the results of the discussion and suggestions from the validator, the student worksheet was then revised, the results of this revision were then used to improve the student worksheet that had been made by including all the suggestions given by the validator so as to produce a valid student worksheet, as shown in the following table:

Table 1. Material Validation Results, Language, and Media

No.	Validated Aspect	Percentage	Average	Information
1.	Material	88.8	4.4	Very Valid
2.	Language	90	4.5	Very Valid
3.	Media	92.72	4.6	Very Valid

Overall Average	90.5	4.5	Very Valid
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d. Phase Dissemination

The student worksheet which were declared valid were then tested to see the level of practicality in using the developed student worksheet. The trial has been carried out from March 18 to March 19, 2021 in class IV elementary school 10 Lubuk Begalung. After the student worksheet trial process, it was continued with the deployment stage by implementing the student worksheet in two different elementary schools. The dissemination stagewas carried out on 11 and 13 June 2022 to students and teachers of elementary school 03 Lubuk Begalung. At this stage, the researcher carried out thematic learning of theme 8 sub-theme 3 learning 1 and 2 with student worksheet using Live Worksheets DL-based.

Table 2. Results of LKPD Practicality

No.	Response	Percentage	Category
1.	Teachers	97.14	Very Practical
2.	Students	93.80	Very Practical
Overall Average		95.47	Very Practical

Based on tables 1 and 2 above it can be interpreted that the application of Liveworksheets Based student worksheet in integrated thematic learning uses the Discovery model Learning in elementary school is very feasible and practical to use. Thus, it can be illustrated that technology-based student worksheet is more preferred and needed by teachers and students in carrying out learning and is very in line with current developments. This is in line with the view that this development makes them more motivated, enthusiastic, getting meaningful learning which will ultimately lead to an improvement in attitudes, increasing students' understanding and skills towards learning (Desyandri et al., 2021) and it can be a more creative way to engage students in collaborative learning and distributed cognition (Ariani et al., 2018).

5. CONCLUSION

Conclusion in this study is the development of student worksheet using Liveworksheets based on Discovery Learning using a 4-D model (four-D models) with the stages, namely define (defining), design (design), development (development), and dissemination (dissemination). The expert team consisting of

material experts, linguists and media experts stated that the worksheets using Liveworksheets based on Discovery Learning were very valid and feasible to use. It is known from the results of the analysis of the material validation instrument that is 88.8%, linguistic validation is 90%, and media validation is 92.72% (very valid). of teacher responses from student worksheet Liveworksheets based Discovery Learning on integrated thematic learning in grade IV SD Negeri 10 Lubuk Begalung with 97.14% results in the very practical category. of student responses from student worksheet Liveworksheets based Discovery Learning in integrated thematic learning in grade IV SD Negeri 10 Lubuk with 92.86% results in the very practical category. So it can be concluded that student worksheet using Liveworksheets based on Discovery Learning which was developed with the 4-D model is feasible and practical to use in elementary schools in integrated thematic learning in grade IV SD.

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