



## DEVELOPING STUDENT WORKSHEETS USING THE CREATIVE THINKING-BASED CANVA APPLICATION

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### Abstract

21st-century education emphasises the importance of providing students opportunities to foster creative thinking, discover new solutions, and apply concepts to everyday life. One practical approach to encourage creative thinking during lessons is engaging materials or media, such as student worksheets (LKPD). This study aims to develop a mathematics teaching tool, specifically a student worksheet using the canva application based on creative thinking for eighth-grade statistics, which is both valid and practical. This research utilises a Research and Development (R&D) approach, employing the ADDIE model. The ADDIE development model includes five stages: analysis, design, development, implementation, and evaluation. Data analysis incorporates both qualitative and quantitative data. According to assessments from content and media experts, the developed LKPD was rated valid with an average score of 3.2. Student feedback surveys yielded a score of 3.25 (perfect), while teacher feedback surveys received a score of 3.47 (very good). Overall, the average score from student and teacher feedback was 3.36 (very good), indicating that the LKPD is practical for teaching. The developed student worksheet using the Canva application based on creative thinking for eighth-grade statistics is categorised as valid and practical for educational use.

**Keywords:** Canva Application, Creative Thinking, Student Worksheets (LKPD), Statistics.

### INTRODUCTION

Learning in the 21st century has its characteristics and specialties, where the education provided in educational institutions must emphasise the development of skills relevant to the demands of the 21st century (Handayani & Wulandari, 2021). Education that prioritises 21st-century skills such as critical thinking skills, creativity, communication, and collaboration (Septikasari & Frasandy, 2018). 21st-century education emphasises the importance of providing space for students to encourage creative thinking, find new solutions, and implement concepts in daily life. Teachers must implement and encourage creative thinking skills during the learning process. By encouraging creative thinking in students, 21st-century education aims to prepare them to overcome future challenges creatively and adaptively. One of the efforts to encourage students to think creatively during learning is to use interesting materials or media to help them understand the ideas taught by the teacher. LKPD is often used as a teaching material for classroom learning (Wandari et al., 2018).

The Student Worksheet (LKPD) is one of the efforts that can stimulate students' creative thinking by providing a series of activities or exercises designed to stimulate imagination, facilitate innovative problem-solving, and encourage students to develop new ideas. With creatively designed LKPD, students can be invited to collaborate, express creatively, and engage the concepts learned with reality, thus helping to stimulate their creative thinking. Student Worksheets (LKPD) have

become an important means in the learning process. However, the design of LKPD is often still simple, so it is not attractive and less motivating for students. Therefore, a more creative and innovative approach is needed in developing LKPD to increase students' interest and motivation to learn (Rosmana et al., 2024). The use of the Canva application in the planning and design of LKPD is expected to produce learning materials that are more interesting, interactive, and can increase student motivation (Chairiyah et al., 2023). It aligns with efforts to provide more interesting learning through technological developments and improve classroom learning quality. Thus, using Canva to develop LKPD is one of the interesting solutions to overcome the challenges of producing more innovative and engaging learning for students in this digital era.

Canva is a well-known design tool that is easy to use and accessible to various groups, including educational environments. With the help of Canva, educators or learning material creators can easily create engaging LKPDs. They can use various canva features such as templates, text, images, icons, and other design elements to create LKPDs according to learning needs (Habaridota, 2023). In addition, Canva also provides a variety of file format options, so that the LKPDs that have been created can be adjusted to the needs of the deployment, such as PDFs to print or images to include in presentations.

Based on the results of the initial interviews that have been conducted by the researcher with the teacher of mathematics subject in grade VIII of SMP Negeri 1 Kembar, information was obtained that the learning activities carried out by teachers have not fully utilized LKPD, as seen from the tendency to use lecture methods, discussions and the presentation of questions directly on the board. Because students do not have sufficient opportunities to develop good learning skills, especially in learning that leads them to think creatively, the LKPD that was previously used has not been able to encourage the active participation of students. The LKPD is not accompanied by activities that trigger students to think creatively. In addition, the monotonous design of the LKPD is less attractive, and the questions presented are less contextual or less likely to encourage students to think creatively.

## **RESEARCH METHODS**

This research uses research and development methods, often called Research and Development (R&D). Research and Development (R&D) research aims to develop or improve an existing product to be better and more accountable (Ansyah et al., 2021). The development model in this study uses the ADDIE development model. The advantages of the ADDIE development model lie in its convenience, organised structure, and popularity in developing effective learning programs or products, and have been approved by experts in their fields (Soesilo & Munthe, 2020). Branch (2009) stated that ADDIE's development model has five stages: analysis, design, development, implementation, and evaluation.

In this study, data will be obtained through LKPD evaluation by various parties, including material experts, media experts, and responses from students and teachers. Evaluations by material

and media experts aim to test the validity of the LKPD, while responses from teachers and students are used to test the practicality of the LKPD. The data analysis techniques in this study include qualitative and quantitative data. Qualitative data consists of input or suggestions provided by validators of material and media experts. In contrast, quantitative data is obtained from the results of validation sheets of material and media experts, as well as the results of questionnaires of student and teacher responses.

Determine the validity level of the LKPD from the material and media expert validation sheet, based on Table 1 below:

**Table 1. Criteria for Validity**

<b>Total Score</b>	<b>Criterion</b>
$3,25 \leq x \leq 4,0$	Highly Valid
$2,5 \leq x < 3,25$	Valid
$1,75 \leq x < 2,5$	Invalid
$1,0 \leq x < 1,75$	Highly Invalid

Determine the level of practicality of LKPD from the student and teacher response questionnaire, based on Table 2 below:

**Table 1. Criteria for Practicality**

<b>Total Score</b>	<b>Criterion</b>
$3,25 \leq x \leq 4,0$	Very Practical
$2,5 \leq x < 3,25$	Practical
$1,75 \leq x < 2,5$	Impractical
$1,0 \leq x < 1,75$	Very Impractical

## **RESULTS AND DISCUSSION**

The creative thinking-based LKPD developed using the Canva application in this study is a printed learning tool designed to stimulate students' creative thinking. This LKPD will contain a summary of the subject matter presented in an attractive and easy-to-understand manner, and description questions designed to encourage students to think creatively in solving learning challenges. Using the Canva application, the design of the LKPD will be enriched with attractive graphics and visual elements to enrich students' learning experience. The following is a discussion of each stage of ADDIE's development design model, among others.

### ***Analysis Stage***

The analysis stage is the first step in the research process; this stage aims to understand the existing situation and conditions and identify the needs that must be met. The analysis stage consists of two main strands: problem analysis and needs analysis. Through interviews with grade VIII

teachers of mathematics subjects, some of the problems include the lack of use of LKPD by teachers, LKPD used previously did not contain activities that triggered students to think creatively, LKPD design that was monotonous and less interesting, and questions that were less contextual or did not encourage students to think creatively.

### ***Design Stage***

In creating LKPDs, the Canva application is used to design the display while creating the LKPD, including selecting fonts, colours, layouts and other elements. The LKPD design is A4 size and comes with appropriate drawings. At this stage, two LKPD products were produced for statistical material. The first LKPD discusses the presentation of data and the size of data centralisation, and the second LKPD discusses the size of data dissemination. The parts of the LKPD consist of the cover, the identity of the LKPD and the learning objectives, instructions for using the LKPD, foreword, concept map, material content, and learning activities. The cover page contains titles, identity information, and images that are relevant to the material presented. The learning objectives section lists the goals that students want to achieve after using the LKPD. These objectives help learners understand what is expected of them after completing the activities in the LKPD. The instructions for using LKPD are designed to help students use LKPD properly. This section explains what learners must do to achieve the best learning outcomes. The preface in this LKPD contains a remark/introduction, the purpose of making the LKPD, the author's expectations, thanks, and the compiler's name. Concept maps help learners understand the material's structure and the relationships between the studied concepts. The content of the material includes explanations of the material and sample questions. Students must understand the explanation of the material provided by scanning the QR code connected to Canva. The learning activity section contains problems compiled based on creative thinking indicators. The problems contained in the LKPD are designed to test students' understanding and encourage creative thinking.

### ***Development Stage***

After the LKPD product is completed, validators, namely material and media experts, will conduct a validity test to ensure that the LKPD developed meets the expected standards and can be used effectively in learning.

### ***Subject Matter Expert Validation***

The validation of material experts is carried out by two experts who have competence in mathematics. Subject matter expert validation includes several aspects, namely the feasibility of the content. Creative thinking, feasibility of discussion, and feasibility of presentation. The data from the validation results of the subject matter experts are in the following table:

**Table 3. Material Expert Validation Results**

No	Aspects	Average	Criterion
1	Content	3,6	Highly Valid

2	Creativeness	3	Valid
3	Language	3,25	Highly Valid
4	Serving	3,37	Highly Valid
	<b>Average</b>	<b>3,3</b>	<b>Highly Valid</b>

Based on Table 3, the final average score from the validation of the subject matter expert was 3.3, with very valid criteria. The material expert validator provides several inputs or suggestions to the researcher to be used as revisions in improving the quality of the LKPD.

#### *Media Expert Validation*

A lecturer of Mathematics Education at the University of Muhammadiyah Purwokerto validated media experts. Media expert validation includes several aspects, namely design appearance, graphics, media feasibility, and usefulness. The data from the validation of media experts is in the following table.

**Table 4. Media Expert Validation Results**

No	Aspects	Average	Criterion
1	Design	3,28	Highly Valid
2	Graphic	3,16	Valid
3	Media Eligibility	3	Valid
4	Benefits	3	Valid
	<b>Average</b>	<b>3,11</b>	<b>Highly Valid</b>

Based on Table 4, the final average score from the validation of the subject matter expert was 3.11 with valid criteria. Media expert validators provide several inputs or suggestions to researchers to be used as revisions in improving the quality of LKPD.

#### *Implementation Stage*

The implementation stage was limited to class VIII G SMP Negeri 1 Kembaran students. The purpose is to find out the practicality of the LKPD. Overall, the average score from the student response questionnaire is 3.25 (very good), which shows that the LKPD developed by the researcher is practical for learning. Teachers' assessments of the LKPD that have been developed have three aspects: learning design, use and display design. The data on teacher responses obtained from the experiments that researchers have conducted are in the following table:

**Table 5. Teacher's Response**

No	Aspects	Rata-Rata	Criterion
1	Learning	3,37	Very Practical
2	Use	3,33	Very Practical
3	Display Design	3,71	Very Practical
	<b>Average</b>	<b>3,47</b>	<b>Very Practical</b>

Based on the data in Table 4, the results of teachers' responses to the development of LKPD were obtained using the creative thinking-based Canva application that has been tested. In the learning aspect,

the average score obtained was 3.37 (Excellent). In terms of usage, the average score is 3.33 (very good), and for the design aspect, the average score is 3.71 (very good). Overall, the average score from the teacher response questionnaire was 3.47 (excellent), which indicates that the LKPD developed by the researcher is practical for use in learning. In line with the research of Pasaribu et al. (2023) and Nasution and Sinaga (2017), it is explained that LKPD that meets practical aspects can improve students' creative thinking skills.

Based on the questionnaire results, students and teachers said that LKPD was good and interesting, based on creative thinking using the Canva application. This LKPD is considered interesting because the printed LKPD is equipped with a barcode to access the explanation of the material digitally through the Canva application, and the problems provided in the LKPD are relevant to daily life, making students feel bored and more enthusiastic about participating in learning. It aligns with research conducted by Said et al. (202,3) who developed LKPD using canva on class VIII relationship and function materials. It received a good response and improved students' understanding of mathematical concepts. This study shows that the resulting LKPD is interesting and can increase students' interest.

### ***Evaluation Stage***

At this stage, the evaluation is based on the comments and responses made by collecting data and information, including scores, comments, and suggestions, from questionnaires filled out by teachers and students. The information collected is used to revise the LKPD to produce a more feasible product and meet the needs and learning objectives set.

### **CONCLUSION**

The results of the research and development of LKPD using the canva application based on creative thinking for grade VIII junior high school statistics concluded that the LKPD developed met the valid aspects with an average score of 3.2, although it required some revisions. The validator provides some input or suggestions to the researcher to improve the quality of the LKPD. The assessment of the practicality of LKPD is carried out through a questionnaire filled out by students and teachers. The questionnaire results from the students obtained a score of 3.25 (perfect). The questionnaire results from the teacher obtained a score of 3.47 (perfect). Overall, the average score of the student and teacher questionnaire was 3.36 (very good), which indicates that the LKPD developed by the researcher is practically used in learning. It shows that the LKPD developed by the researcher is valid regarding materials and media, and practically used in classroom learning. The subsequent research can be carried out as a quantitative test on the impact of LKPD on improving students' creative thinking skills. LKPD can be used in mathematics learning to help increase students' creativity in solving mathematics problems.

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