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## Developing Canva-Assisted Problem-Based Learning Worksheets for Cultural Diversity Learning in Elementary Schools

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### Abstract

This study aimed to develop and evaluate the validity and practicality of Canva-assisted Problem-Based Learning (PBL) student worksheets (LKPD) for cultural diversity materials in fourth-grade IPAS learning at SDN 207 Pembuniang, North Luwu Regency. This research employed a Research and Development (R&D) approach using the ADDIE model, which consists of five stages: analysis, design, development, implementation, and evaluation. The research subjects involved seven fourth-grade students, one classroom teacher, and three expert validators consisting of a material expert, a language expert, and a design expert. Data were collected through observations, interviews, questionnaires, and documentation and analyzed using descriptive qualitative and quantitative techniques. The results showed that the developed worksheets achieved a high level of validity based on expert assessments, including material expert validation at 89.2% categorized as very valid, language expert validation at 79.5% categorized as valid, and design expert validation at 75% categorized as valid. Furthermore, the practicality test demonstrated very practical results, with student responses reaching 93.8% and teacher responses 85.5%. The findings indicate that the Canva-assisted PBL worksheets are feasible and practical for supporting interactive and student-centered learning in elementary school IPAS subjects. The novelty of this study lies in the integration of Canva-assisted visual design with the Problem-Based Learning approach to develop contextual and visually engaging worksheets that support students' participation, motivation, and problem-solving skills in cultural diversity learning.

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## **Introduction**

Learning in elementary schools plays an important role in developing students' cognitive, social, and problem-solving abilities. In the current educational context, learning activities are expected not only to transfer knowledge but also to encourage students to actively participate in the learning process. In Indonesia, the implementation of Natural and Social Sciences (IPAS) learning at the elementary school level aims to help students understand natural phenomena and social realities through meaningful and contextual learning experiences. Therefore, teachers are required to create innovative learning environments that can improve students' engagement, motivation, and critical thinking skills.

However, the implementation of IPAS learning in elementary schools still faces several challenges. Based on interviews conducted with the fourth-grade teacher at SDN 207 Pembuniang, North Luwu Regency, it was found that students showed low learning participation and limited enthusiasm during classroom activities. Most students relied only on textbooks and had difficulty understanding the material independently. In addition, the worksheets commonly used in learning activities only contained practice questions without interactive activities, clear instructions, or attractive visual designs. As a result, students became less motivated and less actively involved in the learning process, particularly in cultural diversity materials that require contextual understanding and active exploration.

Student worksheets (LKPD) are one of the teaching materials that can support active and student-centered learning. LKPD can help students understand learning materials systematically through guided activities, exercises, and problem-solving tasks. Moreover, the implementation of the Problem-Based Learning (PBL) approach in LKPD is considered effective in improving students' critical thinking, collaboration, and problem-solving skills. PBL encourages students to learn through real-life problems and active investigation processes, allowing them to construct knowledge independently through discussion and exploration activities.

Several previous studies have examined the development of PBL-based worksheets in elementary education. Research conducted by Andriana et al. (2022) showed that interactive worksheets can improve students' learning engagement and understanding. Likewise, Iryanto (2021) explained that the PBL approach contributes positively to students' critical thinking and independent learning skills. Other studies also revealed that visually attractive learning media can increase students' motivation and participation in classroom activities. However, most previous studies mainly focused on improving general learning outcomes and have not specifically integrated Canva as a visual design platform in developing PBL-based worksheets for cultural diversity materials in IPAS learning at the elementary school level.

Furthermore, previous studies still provide limited discussion regarding the adaptation of worksheet designs to the characteristics of elementary school students, particularly in creating contextual and visually engaging learning materials that support active participation. In many cases, the developed worksheets were still dominated by text-based exercises and lacked interactive visual elements that could stimulate students' curiosity and learning motivation. Therefore, there is still a need to develop innovative learning materials that combine problem-based learning strategies with attractive digital design platforms to support more meaningful learning experiences.

The novelty of this study lies in the integration of Canva-assisted design features with the Problem-Based Learning (PBL) approach in developing student worksheets (LKPD) for cultural diversity materials in IPAS learning. The developed worksheets are designed contextually based on students' real-life experiences and supported by visually engaging layouts, images, and activity structures to encourage active learning participation. Unlike previous studies that mainly emphasized learning outcomes, this study focuses on developing visually attractive and context-based worksheets that can improve students' engagement, learning motivation, and problem-solving skills in elementary education.

Based on the research gap described above, this study aims to develop and evaluate the feasibility of Canva-assisted Problem-Based Learning student worksheets (LKPD) for cultural diversity materials in fourth-grade IPAS learning at SDN 207 Pembuniang. This study also seeks to determine the validity and practicality of the developed worksheets in supporting active and meaningful learning processes in elementary schools.

## **Method**

This study employed a Research and Development (R&D) approach aimed at developing and evaluating the validity and practicality of Canva-assisted Problem-Based Learning (PBL) student worksheets (LKPD) for cultural diversity materials in fourth-grade IPAS learning. The development process used the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. The ADDIE model was selected because it provides systematic procedures for designing, developing, and evaluating educational products effectively.

The research was conducted at SDN 207 Pembuniang, North Luwu Regency. The subjects of the study consisted of fourth-grade students, classroom teachers, and expert validators. The implementation stage involved a limited-scale trial with seven fourth-grade students and one classroom teacher. In addition, three expert validators participated in validating the product, including a material expert, a language expert, and a design expert. The limited-scale trial was conducted to obtain preliminary information regarding the practicality and feasibility of the developed worksheets before broader implementation.

The first stage of the ADDIE model was the analysis stage. At this stage, the researchers conducted classroom observations, interviews with teachers, and questionnaires distributed to students. The purpose of this stage was to identify students' learning difficulties, the limitations of existing teaching materials, and students' preferences regarding worksheet design and learning activities. The results of the analysis indicated that students required more interactive and visually attractive worksheets that could improve their engagement and participation during IPAS learning activities.

The second stage was the design stage. In this phase, the researchers designed the structure and content of the worksheets based on the results of the needs analysis. The worksheets were developed using the Canva application to create visually engaging learning materials that included colorful layouts, relevant images, learning instructions, summaries of materials, and problem-based activities. At this stage, the researchers also prepared validation sheets and practicality questionnaires as research instruments.

The third stage was the development stage. During this phase, the initial draft of the worksheets was developed and validated by expert validators. The validation process focused on three aspects: material suitability, language appropriateness, and visual design

quality. The material validation included content relevance, alignment with learning objectives, and the suitability of PBL characteristics. Language validation assessed readability, clarity of instructions, sentence structure, and language appropriateness for elementary school students. Design validation focused on layout consistency, typography, image quality, color composition, and visual attractiveness. Suggestions and feedback from the validators were used to revise and improve the worksheets before the implementation stage.

The fourth stage was the implementation stage. The revised worksheets were tested on seven fourth-grade students and one classroom teacher at SDN 207 Pembuniang. The implementation aimed to evaluate the practicality of the worksheets during the learning process. Students and teachers were asked to complete response questionnaires after using the worksheets in classroom activities. The practicality assessment focused on aspects such as ease of use, attractiveness, clarity of instructions, and usefulness in supporting learning activities.

The final stage was evaluation. This study applied formative evaluation conducted at every stage of the ADDIE process. The evaluation aimed to identify weaknesses and improve the quality of the developed product continuously. Revisions were made based on validator suggestions, teacher feedback, and student responses obtained during the implementation stage.

Data collection techniques in this study included observation, interviews, questionnaires, and documentation. Observation and interviews were conducted to obtain information regarding classroom learning conditions and students' learning needs. Questionnaires were used to assess the validity and practicality of the worksheets, while documentation was used to support research data collection. The research process was conducted with permission from the school and the participation of students and teachers during the implementation activities.

The data analysis technique employed descriptive qualitative and quantitative analysis. Qualitative data obtained from interviews, observations, and validator suggestions were analyzed descriptively to improve the product design. Quantitative data from validation and practicality questionnaires were analyzed using percentage calculations with the following formula:

$$\text{Percentage} = (\text{Obtained Score} / \text{Maximum Score}) \times 100\%$$

The results of the percentage calculations were then categorized into validity and practicality criteria as presented in Table 1.

*Table 1. Validity and Practicality Criteria*

Percentage Score	Category
81%–100%	Very Valid / Very Practical
61%–80%	Valid / Practical
41%–60%	Fair
21%–40%	Less Valid / Less Practical
0%–20%	Invalid / Impractical

Products categorized as valid and practical were considered feasible for use in elementary school learning activities.

## **Results**

### ***Analysis Stage***

The analysis stage was conducted to identify students' learning needs and the problems encountered during the IPAS learning process in fourth grade at SDN 207 Pembuniang. Data were collected through classroom observations, interviews with the classroom teacher, and student questionnaires.

Based on interviews with the fourth-grade teacher, it was found that the teaching materials used during learning activities were still limited to textbooks and conventional worksheets. The worksheets commonly used only contained practice questions without summaries of materials, activity instructions, or interactive learning tasks. As a result, students showed low participation and limited enthusiasm during classroom learning activities.

In addition, the results of student questionnaires indicated that students preferred visually attractive worksheets containing real images, clear instructions, colorful layouts, and sufficient answer spaces. Students also preferred worksheets that provided interactive activities and problem-solving tasks rather than worksheets consisting only of written exercises. Therefore, innovative teaching materials were needed to support more engaging and student-centered learning activities.

### ***Design Stage***

At the design stage, the researchers prepared the initial design of the Canva-assisted PBL-based worksheets for cultural diversity materials in IPAS learning. The design process included determining the worksheet structure, selecting learning materials, preparing problem-based activities, and designing visual elements using the Canva application.

The worksheets were designed to include learning objectives, summaries of materials, instructions for activities, contextual problems, group discussion tasks, and evaluation questions. In addition, attractive visual elements such as relevant images, color combinations, icons, and typography were incorporated to improve students' motivation and learning engagement.

A storyboard was also developed to guide the preparation of the worksheet layout and learning flow before the final product was created.

### ***Development Stage***

The development stage focused on producing the initial draft of the worksheets and validating the product through expert assessments. The validation process involved three expert validators consisting of a material expert, a language expert, and a design expert.

The material expert assessed the suitability of the content, learning objectives, and implementation of the PBL approach in the worksheets. The language expert evaluated readability, clarity of instructions, sentence structure, and language appropriateness for elementary school students. Meanwhile, the design expert assessed layout consistency, typography, image quality, and visual attractiveness.

The results of the validation process are presented in Table 2.

*Table 2. Results of Expert Validation*

Validator	Percentage	Category
Material Expert	89.2%	Very Valid
Language Expert	79.5%	Valid
Design Expert	75%	Valid

Based on the results presented in Table 2, the developed worksheets met the validity criteria and were considered feasible for implementation in learning activities. The material aspect obtained the highest score because the content was considered relevant to learning objectives and appropriate for students' characteristics. Suggestions provided by validators were used to revise and improve several aspects of the worksheets before implementation.

### **Implementation Stage**

The implementation stage was conducted through a limited-scale trial involving seven fourth-grade students and one classroom teacher at SDN 207 Pembuniang. The trial aimed to determine the practicality of the developed worksheets during the learning process.

After using the worksheets, students and teachers completed practicality questionnaires regarding ease of use, attractiveness, clarity of instructions, and usefulness in learning activities. The results of the practicality assessment are presented in Table 3.

*Table 3. Results of Practicality Assessment*

Respondent	Percentage	Category
Students	93.8%	Very Practical
Teacher	85.5%	Very Practical

The results indicated that the developed worksheets were categorized as very practical for use in classroom learning. Students showed positive responses toward the visual appearance, activity structure, and problem-solving tasks provided in the worksheets. The classroom teacher also stated that the worksheets helped facilitate more interactive and student-centered learning activities.

### **Evaluation Stage**

The evaluation stage was conducted continuously throughout each phase of the ADDIE model using formative evaluation techniques. Evaluation activities aimed to identify weaknesses and improve the quality of the developed worksheets.

During the analysis stage, the evaluation focused on ensuring that the collected data accurately represented students' learning needs. At the design stage, the evaluation emphasized the suitability of the worksheet layout, learning activities, and visual presentation. In the development stage, revisions were made based on suggestions from expert validators regarding language clarity, material presentation, and visual design improvements.

Furthermore, during the implementation stage, evaluations were conducted based on student and teacher responses after using the worksheets in classroom learning. Overall, the evaluation results indicated that the Canva-assisted PBL-based worksheets were valid and practical for supporting cultural diversity learning in fourth-grade IPAS subjects.

## **Discussion**

The findings of this study indicate that the Canva-assisted Problem-Based Learning (PBL) worksheets developed for cultural diversity materials in IPAS learning are categorized as valid and practical for use in elementary school learning activities. The high validation scores from material, language, and design experts demonstrate that the developed worksheets have fulfilled the criteria of appropriate instructional materials in terms of content suitability, readability, and visual presentation.

The material validation results showed that the worksheets were relevant to the learning objectives and successfully integrated the characteristics of the Problem-Based Learning approach. This finding supports the constructivist learning theory, which emphasizes that students actively construct knowledge through meaningful learning experiences and problem-solving activities. Through contextual problems related to cultural diversity, students are encouraged to explore ideas, discuss with peers, and develop their understanding independently. This aligns with the opinion of Iryanto (2021), who explained that PBL can improve students' critical thinking and independent learning abilities through active investigation processes.

Furthermore, the language validation results indicate that the worksheets used clear and understandable language appropriate for elementary school students. The use of simple instructions and structured activity steps helped students participate more actively in the learning process. This finding is important because instructional materials designed according to students' developmental characteristics can support better learning comprehension and engagement.

The design validation results also revealed that the visual appearance of the worksheets contributed significantly to students' learning motivation. The integration of Canva in designing the worksheets enabled the researchers to create visually attractive teaching materials through the use of relevant images, balanced color combinations, icons, and organized layouts. Attractive visual elements can increase students' attention and learning interest, particularly among elementary school students who tend to prefer concrete and visually engaging learning media. This finding is consistent with previous studies conducted by Andriana et al. (2022), which stated that interactive and visually appealing learning materials can improve students' engagement and participation during classroom activities.

The practicality test results demonstrated that students and teachers responded positively to the developed worksheets. Students considered the worksheets easy to use, interesting, and helpful in understanding cultural diversity materials. Meanwhile, the teacher stated that the worksheets supported more interactive and student-centered learning activities. These findings indicate that the integration of PBL activities with attractive worksheet designs can create a more meaningful learning experience for students.

The implementation of PBL in the worksheets also contributed to improving students' active participation during learning activities. Through problem-solving tasks and group discussions, students were encouraged to collaborate, share opinions, and participate actively in classroom interactions. Compared to conventional worksheets that mainly focus on written exercises, PBL-based worksheets provide opportunities for students to develop higher-order thinking skills and social interaction abilities simultaneously.

In addition, the use of Canva as a digital design platform provided advantages in developing flexible and innovative teaching materials. Canva allowed the researchers to combine visual and textual elements systematically, resulting in worksheets that were not only informative but also aesthetically attractive. This supports the idea that technology integration in educational materials can improve the quality of learning resources and increase students' learning motivation in elementary education.

The novelty of this study lies in the integration of Canva-assisted visual design with the Problem-Based Learning approach in developing contextual worksheets for cultural diversity materials in IPAS learning. Unlike previous studies that primarily focused on general learning outcomes, this study emphasizes the development of visually engaging and context-based worksheets that support active participation and meaningful learning experiences among elementary school students.

Despite the positive findings, this study has several limitations. The implementation stage was conducted only on a limited scale involving seven students in one elementary school, which may limit the generalization of the findings. Therefore, further studies are recommended to involve larger participant groups and broader implementation settings to evaluate the effectiveness of the developed worksheets more comprehensively.

## **Conclusion**

This study successfully developed Canva-assisted Problem-Based Learning (PBL) student worksheets (LKPD) for cultural diversity materials in fourth-grade IPAS learning at SDN 207 Pembuniang. The development process was conducted using the ADDIE model, which includes the stages of analysis, design, development, implementation, and evaluation.

The findings revealed that the developed worksheets met the criteria of validity and practicality based on expert validation and user responses. The material expert assessment obtained a score of 89.2% categorized as very valid, while the language expert and design expert assessments obtained scores of 79.5% and 75%, categorized as valid. In addition, the practicality test showed very practical results, with student responses reaching 93.8% and teacher responses 85.5%. These findings indicate that the developed worksheets are feasible for use in elementary school learning activities.

The integration of Canva-assisted visual design with the Problem-Based Learning approach contributed positively to creating more attractive, interactive, and student-centered learning materials. The developed worksheets not only supported students' understanding of cultural diversity materials but also encouraged active participation, collaboration, and problem-solving activities during the learning process.

This study implies that innovative and visually engaging teaching materials can improve students' learning motivation and participation in elementary education. Therefore,

teachers are encouraged to develop contextual and technology-assisted learning materials that support active learning experiences in the classroom.

However, this study was limited to a small-scale implementation involving only seven students in one elementary school. As a result, the findings cannot yet be generalized to broader educational contexts. Future studies are recommended to conduct wider implementation involving larger participant groups and to examine the effectiveness of the developed worksheets in improving students' learning outcomes and critical thinking skills.

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