

DEVELOPMENT OF PROJECT-BASED LEARNING MODULES ON THE APPLICATION OF PANCASILA PRINCIPLES FOR FOURTH GRADE STUDENTS

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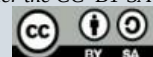
KEYWORDS

Modules, Project Based Learning, Elementary School

ABSTRACT

This study aims to produce a Project-Based Learning (PJBL) module on the application of Pancasila principles for fourth-grade students. This research is a development study using the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). This study consists of three stages: Analysis, Design, and Development. The data collection instruments used were questionnaires given to subject matter experts, language experts, and design experts with the appropriate qualifications. The subjects in this study were six expert validators consisting of two subject matter experts, two language experts, and two design experts. The data collection techniques used were interviews using interview sheets and questionnaires using questionnaires validated by subject matter experts, language experts, and design experts. The data analysis technique used in this study was qualitative analysis of comments and suggestions, while quantitative analysis was obtained from validity scores and responses from teachers and students. The validity of the Project-Based Learning (PJBL) module on the Application of the Pancasila Principles has reached a very valid level. The details of the assessment are as follows: the material validation results obtained a percentage of 91.50% in the highly valid category, language experts obtained a percentage of 90.67% in the highly valid category, and design experts obtained a percentage of 88.75% in the highly valid category.

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INTRODUCTION

Education produces a generation of citizens who have high-quality attitudes, abilities, and knowledge. There must be a plan to improve the standard of education. Some examples of such plans include increasing the education budget, improving facilities, and improving the quality of teachers. However, there are still a number of obstacles that are of concern in its implementation. (Thanks, 2022). The National Education System Law (UU Sisdiknas) Number 20 of 2003 explains that education is a conscious and planned effort to create a learning atmosphere and teaching-learning process so that students can actively develop their potential to have spiritual and religious strength, self-control, personality, intelligence, and character. actively develop their potential to possess spiritual and religious strength, self-control, personality, intelligence, noble character, and skills required by themselves, society, nation, and country. According to

Sapriyah, (2019) Education is essential in the learning process because it helps students develop their knowledge, morals, and behavior. Through various learning activities, education itself functions as a tool to help people adapt to society. Given the current state of education, teachers no longer have time to implement teacher-centered teaching methods, also known as traditional learning, which rely entirely on lectures or memorization techniques. Teachers must update their professionalism, skills, and knowledge. Therefore, to make learning more meaningful, teachers must provide the best resources and facilities for students using original and creative methods.

Humans face various problems in their lives due to the rapid advances in the field of information and technology. The field of education has now entered the era of technology, where the quality of teaching and learning in the classroom is influenced by the appropriate use of technology and the use of media and teaching materials in the learning process. Significant technological advances have impacted human life, especially in the field of education. (Amelia, 2022). According to Reswita & Wiratsiwi in (Hardianti et al., 2024), learning success can be achieved if teachers can design interesting and effective teaching materials according to the needs of students. One way to do this is to use visually appealing teaching materials to engage students and make it easier to achieve learning goals. Teachers can create online teaching materials more easily using the Canva program, which provides a variety of attractive visual elements, functions, and animations. In this situation, teachers must utilize technology-based media to create innovative learning resources. (Lalu et al., 2020).

Citizenship education aims to form good Indonesian citizens. Civic education is a compulsory subject that must be completed by students in order to become good, intelligent, and noble citizens in the real world. The application of the Pancasila Principles The curriculum is a very important resource for teaching basic principles such as responsibility, justice, tolerance, and cooperation at the elementary school level, especially in the fourth grade. However, in practice, traditional teaching methods that emphasize memorization, lectures, and written assignments still dominate the classroom learning experience. As a result, students only have a theoretical understanding of the principles of Pancasila and are unable to apply them in real situations. On the other hand, the development of information and communication technology provides great opportunities for innovation in learning, one of which is through the development of modules. Modules are teaching materials that can contain text, images, videos, animations, and exercises that are interactively designed using Canva. Ideally, modules are used in Pancasila education to help students understand the application of Pancasila principles in a more contextual and relevant way. In the classroom, this allows teachers to deliver material in a more engaging and varied way.

Based on the results of interviews conducted on March 5, 2025 by fourth-grade teachers, it was found that teachers only used friendly methods, discussions, and assignments, which made students less enthusiastic in the learning process. lectures, discussions, and assignments, which make students less enthusiastic in the learning process. And teachers only use general teaching materials such as printed teaching materials, namely printed books. In this new teaching method, students no longer use workbooks, and printed books are only available in schools and cannot be taken home, so students cannot learn using printed books. The delivery of material taught by teachers is still limited to whiteboards and LKPD because the number of textbooks is limited and the content of the teacher's handbook is too short, making it difficult for students to understand. One of the subjects that is poorly understood by students is the application of Pancasila principles. This problem makes students less enthusiastic in the learning process, which results in difficulties in understanding the learning material correctly and precisely.

From the above problems, solutions can be provided. The researchers are interested in further investigating the project-based learning model and its development. It is important to create project-based learning modules specifically designed to help elementary school fourth graders understand and apply Pancasila values through practical, fun, and cooperative project activities. For optimal module development, the approach used needs to consider the use of technology in learning. Therefore, the Project-Based Learning model is used as the basis for development. The Project-Based Learning module is a solution to the above problems that will be developed.

Based on the explanation above, this research aims to create a valid and appropriate learning module that contains material on the application of Pancasila principles for fourth grade elementary school students.

RESEARCH METHODS

The research method used in this study is the development research method. The development model used is the ADDIE model. According to Adesfiana, (2022) The ADDIE Model is a systematic approach used to design and develop learning programs, consisting of analysis, design, development, implementation, and evaluation, which are the five stages of the ADDIE Model. However, this research is carried out until the development stage, because the focus is on producing learning modules that are ready to be tested for feasibility. The subjects in this study consisted of 1 teacher, 6 students, and 6 expert validators consisting of 2 subject matter experts, 2 linguists, and 2 design experts. The data analysis technique in this study is qualitative based on suggestions and comments, while quantitative data is obtained from validity scores and responses from teachers and students.

Development of Project-Based Learning (PBL) modules for grade IV students at SDN 193 Pekanbaru, located on Jl. Kartama, Perhentian Marpoyan, Kec. Marpoyan Damai, Pekanbaru City, Riau, in the application of Pancasila principles.

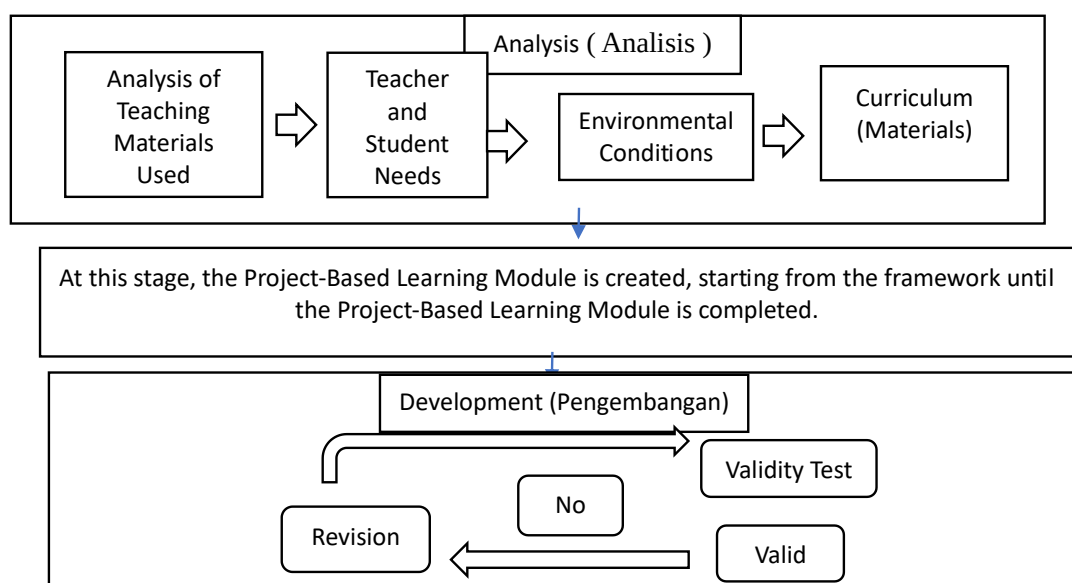


Figure 1. Research Procedure

The validity test for the developed Project-Based Learning-based modules will be measured using the Likert scale. The Likert scale is a measurement method used to measure a person's attitude, opinion, or perception of an object or phenomenon. Pradana, F. A. P & Mawardi, (2021)). The formula used by the researchers to process the data was adopted from (Gulo, S & Harefa, 2022) as follows:

$$P = \frac{F}{N} \times 100\%$$

Information:

P = percentage score

F = total score from data collection

N = maximum score

From the percentage of validity obtained, the researcher then determines the product validity criteria as listed in the following table:

Table 1. Product Validity Criteria

Score	Category
80% - 100%	Very Valid
60% - 79,9%	Valid
40% - 59,9%	Invalid
≤ 39.9%	Not valid

(Source: Amalia, M., & Ramadan, (2024) modified by the researcher).

In this study, the validation process is considered complete when the validator's score is between 80% and 100% without revision.

Table 2. Teacher and Student Response Criteria

Score	Category
81 – 100%	Excellent
61 – 80%	Good
41 – 60%	Enough
21 – 40%	Less
0 – 20%	Very Less

Source: (StuRat et al. 2023)

Responses from teachers and students are considered complete if the Project-Based Learning (PBL) module achieves a score of 81–100% in the superior category

RESEARCH RESULTS

The product resulting from this development is the Project-Based Learning (PJBL) module. This module was designed by the researchers as additional teaching materials that not only help teachers in delivering the material. This research focuses on the development of learning modules on the application of Pancasila principles in the fourth grade of elementary school. The purpose of this research is to produce learning modules that are valid and suitable for use in elementary schools.

This development research uses the ADDIE model. According to Hidayat, F., & Nizar, n.d. (2021) The ADDIE model is used as the basis for learning development, namely to design and develop learning products. This development model consists of five stages: analysis, design, development, implementation, and evaluation. However, due to time constraints, this research was carried out until the development stage. According to Rusmawati, R. D., Info, A., & History, (2023) The ADDIE model has effective and dynamic measures and a systematic structure, so it can be used for different types of product development. The stages carried out in the research based on the ADDIE model are as follows:

A. Analysis

The initial stage of this development research began by conducting an analysis as a basis for designing and compiling products in the form of educational learning modules that are contextual and tailored to the needs of students. According to Dalimunthe, A., Affandi, M., & Suryanto, n.d. (2021) The analysis stage is the stage of identifying the need to define and define problems in the field, then generating an overview and alternative solutions to those problems. The needs analysis in this study includes three main aspects, namely curriculum analysis, teacher needs analysis, and student needs analysis, as follows:

1. Curriculum Analysis

The curriculum analysis stage is carried out to ensure that the material is in accordance with the independent curriculum applied in elementary schools. The material developed focuses on the application of the meaning of Pancasila principles. The learning outcomes emphasized the importance of students explaining and demonstrating the application of the meaning of Pancasila principles contextually in their daily lives. The values of tolerance, cooperation, and justice are developed according to the student's developmental stage. The following are the learning outcomes and objectives of the material on the application of the meaning of Pancasila principles:

Table 2. Learning Outcomes and Learning Objectives

Learning Outcomes	Learning Objectives
Peseta didik shows the meaning of the principles of Pancasila and the application of these principles in daily life in the family, school, and community.	1. List of Pancasila principles and their symbols 2. Explain the meaning of each of the principles of Pancasila

3. Show the application of Pancasila principles in family, school, and society

2. Teacher Needs Analysis

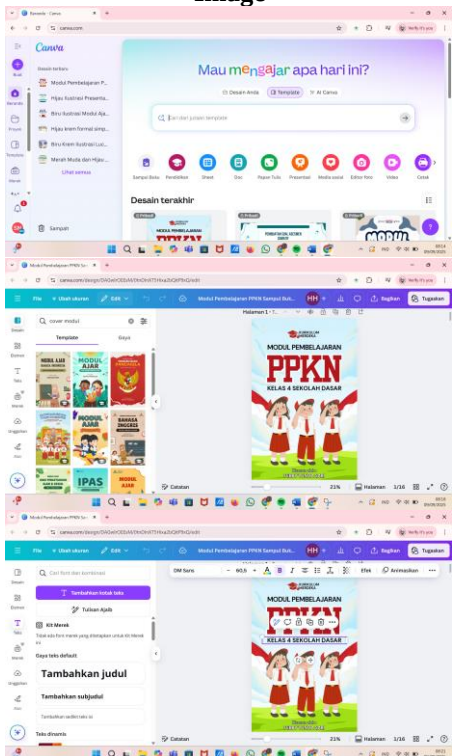
The analysis of teacher needs aims to identify the types of teaching materials that teachers need to support the achievement of learning objectives. The results of the analysis showed that teachers still use printed teaching materials in the form of textbooks and student worksheets (LKS) and apply the Problem-Based Learning (PBM) model. The teacher stated that the lack of learning resources made the learning process less interesting and students quickly felt bored. Textbooks are only available in schools, resulting in less effective and efficient allocation of study time as most of the remaining time is spent taking notes, while worksheets are considered inadequate in explaining the material.

3. Student Needs Analysis

Interviews with fourth-grade students show that students often have difficulty understanding the material about the application of Pancasila principles. Students said that they felt burdened by the obligation to take notes of all the material because they were not allowed to take their textbooks home. They find taking notes of material to be very tiring and time-consuming, and this often makes them lose focus on the teacher's explanations.

B. Design

This stage involves planning and creating modules based on Project-Based Learning (PJBL). Based on the data obtained from the analysis stage, the next step is to design a module based on Project-Based Learning (PJBL). According to Hayya & Widyasari (2022). In developing modules based on Project-Based Learning, the development of these modules involves several stages as follows:

No.	Internship	Description	Image
1	Module Development	Open the Canva app, and make sure you are logged into your Canva account. Go to the Canva homepage and select an A4-sized document.	
2	Creating a Module Cover	Select the desired cover template. To edit text in the template, double-click on the text you want to change.	

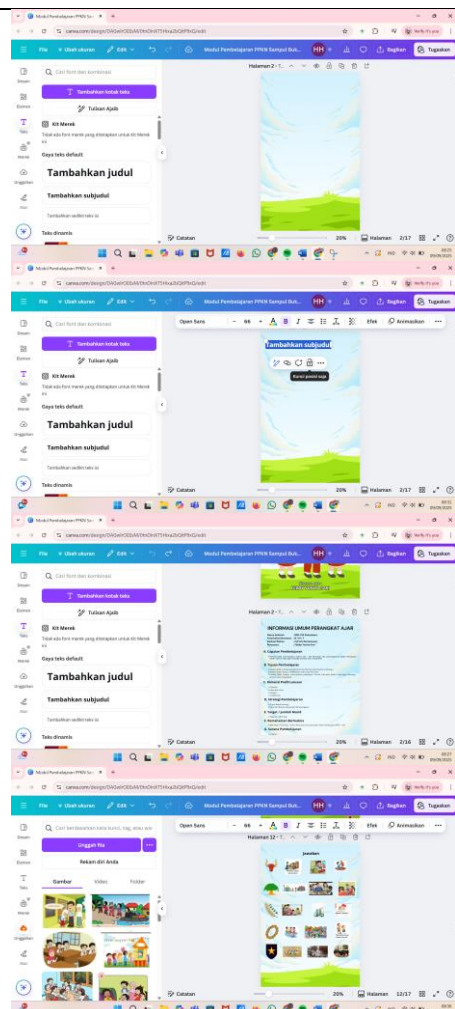
3 Creating the Module Content Section

Add a blank page by clicking "add page" or clicking "duplicate" in the upper right corner.

Click "Add Text Box" to add text, then set the font type, size, and color as desired.

Then fill in the text with what you wrote in the text box provided.

To add an image, click "Upload Files," then select the image you have uploaded.



Once all module page design formats were completed using Canva, the researchers first established the Project-Based Learning (PJBL) framework as the basis for development.

C. Development

The research development stage involves the validation of modules that have been designed and developed. Validation is done to assess feasibility based on content, language, and design aspects. The validation process aims to ensure that the media is suitable for use as teaching materials and in accordance with the characteristics and needs of students. The modules are validated by six validators consisting of two content experts, two linguists, and two design experts. The modules were evaluated using a validation questionnaire containing a number of assessment indicators related to content, language, and visual design suitability. Each validator provides an assessment using a pre-prepared validation sheet and provides suggestions or input for product improvements.

The list of names and expertise involved in the validation process of module-based digital teaching materials in this study is as follows:

Table 3. List of Expert Validators

No.	Expert	Validator Code	Agency
1.	Material	EN	Lecturer in Elementary School Teacher Education, University of Riau
		DP	Teacher at SDN 193 Pekanbaru
2.	Language	L	Lecturer in Elementary School Teacher Education, Riau Islamic University

3.	Design	RH	Teacher at SDN 193 Pekanbaru
		AXLE	Lecturer in Elementary School Teacher Education, Riau Islamic University
		S	Teacher at SDN 193 Pekanbaru

At this validation stage, comments and suggestions from experts (validators) will be followed up by researchers with the aim of improving and refining the developed modules to be better. Here are the results of validation and revision based on suggestions from validators:

1. Validation by a subject matter expert

Validation by experts of this material is carried out to assess the suitability of the material used by the researcher, as well as the accuracy and clarity of the material in the module teaching materials. This validity assessment was carried out by two experts, Mr. EN and Mrs. DP. The results of the assessment of the material aspects are as follows:

Table 4. Material Validation Results

Validator	Percentage	
	Validation 1	Validation 2
EN	88%	90%
DP	-	91%
Average	88%	90,50%

The table above shows that the first validation results obtained a score of 88% from Mr. EN and were categorized as "very valid." The suggestion given is that learning activities for the stages/situations of PJBL and LKPD are adjusted to the objectives of the learning indicators. In addition, the assessment from Mrs. DP is 91% and is also in the category of "very valid." Mrs. DP suggested that the appendix of the assessment be added and the LKPD instructions be replaced.

Following up on input from both validators, the researchers revised and proceeded to the second validation stage. The results of the second validation showed that the learning module product obtained an average score of "91.50%," which is in the category of "very valid." This achievement shows that the Project-Based Learning module has met the eligibility criteria and is considered feasible to use in the learning process for fourth grade elementary school students.

2. Language Validation

The language aspect has been verified by two validators, Mr. Latif, S.Pd., M.Pd., and Mrs. Rahmatul Hidayati, S.Pd., who both evaluated the linguistic aspects of the developed module products. The results of the evaluation are presented in the following table:

Following up on the results of language evaluation by linguists on the Project-Based Learning module product at the first validation stage

Table 5. Language Validation Results

Validator	Percentage	
	Validation 1	Validation 2
L	76%	90,67%
RH	-	90,67%
Average	76%	90,67%

The table above shows that the first validation result obtained a score of 90.67% from Mr. L and was categorized as "very valid." The advice given is to correct the writing errors. In addition, the score of 90.67% of Mrs. RH was also categorized as "very valid." Mrs. RH suggested that the writing be corrected.

Following up on input from the two validators, the researcher revised and proceeded to the second validation stage. The results of the second validation showed that the learning module product obtained an average score of "90.67%," which was in the category of "very valid." This achievement shows that the Project-Based Learning module has met the eligibility criteria and is declared suitable for use in the learning process for fourth grade elementary school students.

Design validation was carried out by two validators, Mr. AS and Mrs. S, who evaluated the appearance and quality of the design in the developed learning modules. The results of the evaluation by the two validators are presented in the following table:

Table 6. Design Validation Results

Validator	Percentage
	Validation 1

AXLE	88,33%
S	89,17%
Average	88,75%

Following up on the results of the design assessment by two experts on the learning module products that have been developed, Mr. AS gave a score of 88.33% in the "very valid" category. Meanwhile, Mrs. S gave a score of 89.17%, also in the "very valid" category. The average validation result of the two experts was 88.75%, which is in the "very valid" category. Therefore, the validation of the design aspect is only carried out once by each expert, as the results of the assessment meet a high level of validity and the product is considered suitable for use without revision.

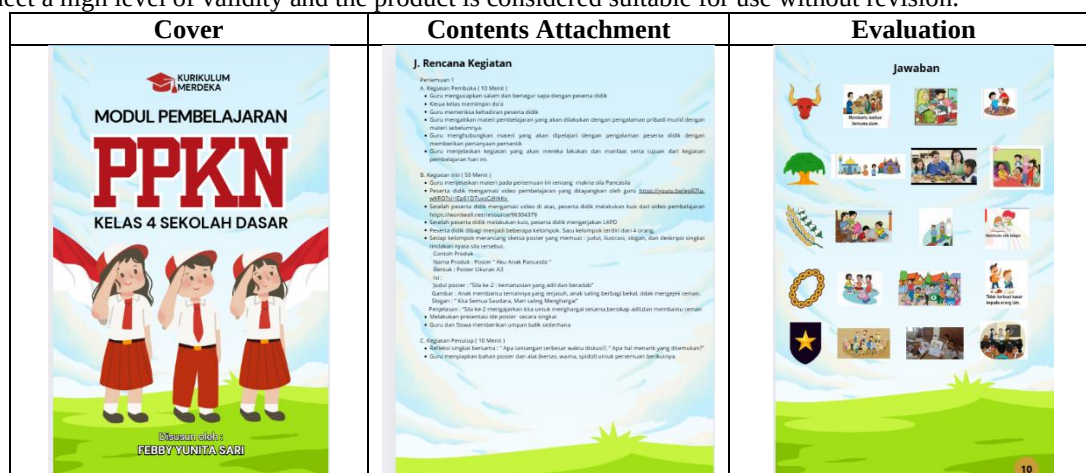


Figure 2. Results After Addition

4. Teacher and Student Responses

Once the Project-Based Learning (PBP) modules were verified in terms of materials, language, and design, the researchers proceeded to determine teacher and student responses. These responses involved one fourth-grade teacher and six fourth-graders, based on responses provided by teachers and students through questionnaires. A full description of the teacher's response is presented in the following table:

Table 7. Teacher Response Results

No.	Assessment Aspects	Mrs. Desi Pebrianti, S.Pd	Category
1	Presentation of material	100%	Very Good
2	Visual display	100%	Very Good
3	User-friendliness	100%	Very Good
4	Benefits	100%	Very Good
Average		100%	Very Good

(Source: Researcher-processed data)

Based on Table 7, the responses of fourth-grade teachers show a percentage of 100% in the "excellent" category. This shows that digital teaching materials based on Project Based Learning (PBL) are suitable for use in the learning process. In addition, the responses of six students to the learning modules can be seen in Table 8 as follows:

Table 8. Student Responses to the PJBL-Based Module

No.	Student Name	Score Empirical	Maximum Score	Percentage	Category
1	TH	10	10	100%	Very Good
2	S	10	10	100%	Very Good
3	A	10	10	100%	Very Good
4	R	10	10	100%	Very Good
5	BR	10	10	100%	Very Good
6	W	10	10	100%	Very Good
Average				100%	Very Good

(Source: Researcher's Processed Data)

Based on Table 8, the responses from 6 students, as recorded in the table, show that the students' responses resulted

in an average score of 100%, which means that the Project-Based Learning module is considered "excellent" for students.

Table 9. Average Responses of Teachers and Students to PJBL-based modules

Yes	Response Results	Percentage	Category
1	Teacher	100%	Very Good
2	Student	100%	Very Good
	Average	100%	Very Good

Based on Table 9, the score obtained from the teacher's response reached 100% in the very good category, while the score obtained from the student's response also reached 100% in the very good category. Therefore, the average score obtained from teacher and student responses for the Project-Based Learning module is in the excellent category.

DISCUSSION

Based on the results of the research that has been explained above, this section will discuss in detail. This development research resulted in a Project-Based Learning (PJBL) module with the help of Canva as an interactive teaching material for grade IV elementary school students. The first step in this study is to conduct an analysis through interviews with teachers who apply the Project-Based Learning model in teaching the application of Pancasila principles at SDN 193 Pekanbaru. The results of the analysis showed that the material on the application of Pancasila principles was only taught through lectures and discussions, as well as the use of worksheets (LKS), while textbooks were only used during lessons at school, so that students did not understand abstract material and the application of Pancasila principles in daily life.

After the researcher finds the above problem, the next step is to analyze the curriculum used by schools to identify learning outcomes and learning objectives in the material on the application of Pancasila principles. This analysis is carried out based on the Merdeka curriculum that is currently used in learning. At the design stage, according to Ismi, I. N., & Ain, (2021) The design stage is the stage where researchers design the developed modules according to their needs. At this stage, the researcher began to design the module with the help of Canva, applying the meaning of Pancasila with the results of the analysis and design that had been planned. This process begins by considering learning outcomes and learning objectives so that the content becomes more focused and systematic. After that, the researcher created a cover using the Canva application by choosing an A4 size, determining the background, and editing the text to be used.

Once the design process is complete, the modules developed with Canva's help will be verified at the development stage. In accordance with this, in the opinion Febriyandani, R., & Kowiyah, (2021) Development is the stage where the researcher develops a product into reality. At this stage, a validity test is carried out to assess whether the product is suitable for use or according to expectations. Validation is carried out by validators consisting of three aspects evaluated, each with two validators, namely two subject matter experts, two linguists, and two design experts. The validation score from the subject matter expert in the first validation reached 88% with the category "very valid" with revisions from validator 1, Mr. ED, and validator 2, Mrs. DP. After the revision was carried out in the second validation, a score of 90% was obtained from Mr. ED and 91% from Mrs. DP. In the first validation by linguists, a score of 76% was obtained with a revision from validator 1, Mr. L. After the revision was carried out in the second validation, a score of 90.67% was obtained from validator 1 and 90.67% from validator 2, Mrs. RH. At the first validation by a design expert, a score of 88.75% was obtained with the category of "very valid" without revision, meaning that the module is ready to use. Based on the results of validation by subject matter experts, linguists, and design experts, the overall validation results are summarized in the following table:

Table 7. Recapitulation of Learning Module Validation Results

Aspects assessed	Validation 1	Validation 2	Average	Category
Material	88%	90,50%	89,25%	Very Valid
Language	76%	90,67%	83,33%	Very Valid
Design	88,75	-	88,75%	Very Valid
	Overall Average		87,11%	Very Valid

Based on Table 7, the results of the overall validation of the learning module showed an average score of 87.11% from the six validators, with the category "very valid." These results show that the Canva-assisted Project-Based Learning module has met the eligibility criteria and is declared valid for use in the learning process. In addition, a comparison of the first and second validation results for the learning module is presented in the following diagram:

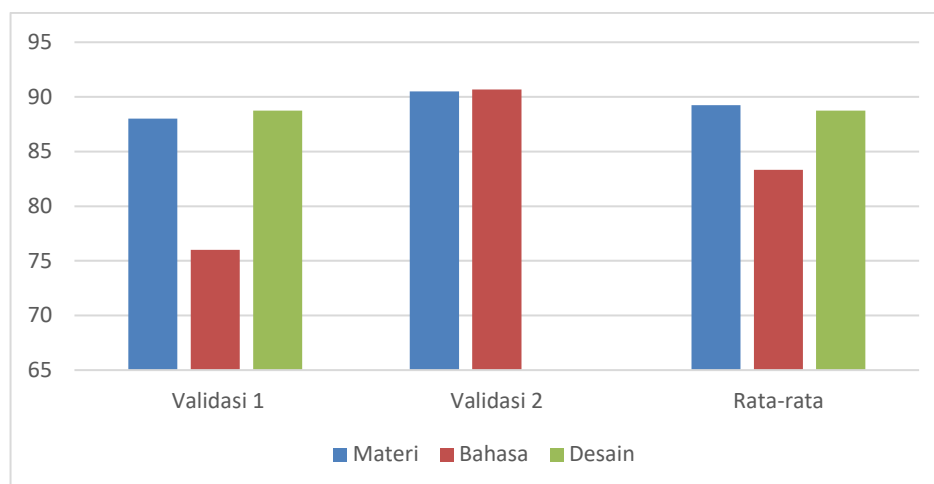


Figure 10. Validation Results Comparison Diagram

Based on Figure 10, a comparison diagram of the assessment results, it can be seen that there was an increase in scores in each aspect of validation after improvements were made to the Project-Based Learning module with the help of Canva. In terms of material, the validation score increased from 88% to 90.50%, or an increase of 2.5%. The language aspect also showed an increase from 76% to 90.67%, with a difference of 14.67%. Meanwhile, in the design aspect, only one validation was carried out with a score of 88.75%, so there was no comparative data to assess improvements. Overall, the average validation results of all aspects reached 87.11%, which falls into the "very valid" category. This improvement is the result of a revision process based on suggestions and input from experts involved in validation. This shows that the learning modules developed have been refined in terms of materials, language, and design, so that they are declared very valid and suitable for use in the learning process for fourth grade elementary school students. According to Nurhaliza, Yakob, M., & Nafaida, (2019) He stated that his research showed that the development of modules can improve conceptual understanding and learning motivation, with 87.11% of students meeting the criteria of "very valid", meaning that they are able to follow the learning process according to the stages listed in the module. Meanwhile, according to . (Yuristia, F., Hidayati, A., & Ratih, 2022) He said that the development of modules can help teachers implement more innovative learning processes. According to (Lestari, S. I. P., Andriani, 2019) Explains that modules that are suitable for testing are those that have been generally verified by material, language, and design validators. Therefore, the modules that are declared suitable for testing are those that, when tested, are able to improve the conceptual understanding and learning motivation of elementary fourth-graders.

The modules developed are Project-Based Learning (PBBP)-based modules designed to help improve students' understanding and motivation, so that the learning process becomes more interesting and meaningful. This research is similar to the assessment that has been carried out by (Yuristia, F., Hidayati, A., & Ratih, 2022) Regarding the development of Project-Based Learning modules, this can improve Pancasila learning outcomes as evidenced by tests conducted with very feasible assessment criteria.

CONCLUSION

Based on the results of the research, it can be concluded that the Canva-based module developed to teach the meaning of Pancasila to grade 4 elementary school students has met the criteria for validity and suitability as a teaching material. This is evidenced by validation results from subject matter, language, and design experts, who show that the assessment is "very valid." These findings show that the Project-Based Learning module supported by Canva is effective, engaging, and appropriate to learning needs, making it suitable to be used to support students' understanding of the material on the application of Pancasila principles.

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