



Development of Math Booklet Media for Elementary School Students

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Abstract: This research focuses on the development, validity, and practicality of booklet-based teaching materials for mathematics subjects, specifically on equivalent fractions. Following the Research and Development (R&D) model, which incorporates the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) design stages, this research aims to create effective learning aids. The assessment of the developed Booklet showed high validity and practicality. The material expert assessment rated it "very valid" at 93.33%, while the media design and language experts rated it high at 98.57% and 95%, respectively. In addition, both teachers and students considered the Booklet practical, with response percentages of 87% and 94%, respectively. These findings underscore booklet-based learning materials' effectiveness and ease of use in mathematics education. The Booklet is a valuable tool for teachers to deliver curriculum content effectively and for students to improve their understanding of mathematical concepts. Learning outcomes can be significantly enhanced through such media, facilitating understanding and practical application of mathematical principles.

Abstrak: Penelitian ini berfokus pada pengembangan, validitas, dan kepraktisan bahan ajar berbasis buku panduan untuk matematika, khususnya mengenai pecahan setara. Mengikuti model Research and Development (R&D) yang mencakup tahapan desain ADDIE (Analysis, Design, Development, Implementation, and Evaluation), penelitian ini bertujuan untuk menghasilkan bahan ajar yang efektif. Penilaian terhadap buku panduan yang dikembangkan menunjukkan tingkat validitas dan kepraktisan yang tinggi. Ahli materi memberikan penilaian "sangat valid" sebesar 93,33%, sedangkan ahli desain media dan bahasa juga memberikan penilaian yang tinggi yaitu 98,57% dan 95%. Selain itu, baik guru maupun siswa menganggap buku panduan ini praktis, dengan persentase tanggapan masing-masing 87% dan 94%. Temuan ini mengkonfirmasi keefektifan dan kemudahan penggunaan materi pembelajaran berbasis buku panduan dalam pendidikan matematika. Buku panduan ini berfungsi sebagai alat bantu yang berharga bagi guru dalam menyampaikan konten kurikulum secara efektif dan bagi siswa dalam meningkatkan pemahaman konsep matematika. Melalui media tersebut, hasil pembelajaran dapat ditingkatkan secara signifikan, memfasilitasi pemahaman dan penerapan praktis prinsip-prinsip matematika.

A. Introduction

Education is given top priority by society, as mentioned by Muthoharoh & Sakti (2021). Article 28 Paragraph 1 of the 1945 Constitution affirms the right of every individual to develop themselves through education and to utilize science, technology, art, and culture to improve the quality of life and the welfare of humanity (Susilo, 2023). Mathematics is a significant area of education because its concepts, such as counting, addition, and subtraction, have been used in everyday life since childhood (Istikhomah et al., 2023). Therefore, teaching math lessons to children from elementary school is essential. Math education aims to shape students to think systematically, logically, and critically when facing problems in everyday life.

Education is essential in facing competition in various fields in the modern era (Turnip & Karyono, 2021). Education is considered the best means to produce quality and potential human resources for the nation. Mathematics education, in particular, has a significant role in everyday life, as reflected in the benefits and applications of mathematics in everyday life. Therefore, math is taught at all levels of formal education. Through math education, students can develop the potential to think logically, structurally, responsively, and creatively, as stated by Istikhomah et al (2023). Developing these skills is significant because it helps students obtain, manage, and use information to overcome various challenges in everyday life that are constantly changing. Learners have a variety of perspectives on mathematics. Some find it a complex subject to understand, while others find it exciting and fun (Istikhomah et al., 2023). However, negative perceptions of math often impact their learning outcomes.

According to the PISA survey 2018 results, Indonesia's math score is low, even comparable to the average score of OECD countries, which is significantly lower than the average of 78 countries surveyed (Marleni et al., 2021). This has encouraged mathematics educators and experts to look for new teaching approaches or models that can increase interest in learning mathematics throughout Indonesia. According to the results of the PISA survey, there are still obstacles to mastering mathematics material in Indonesia. Students face difficulties in focusing on math learning due to long class hours, the complexity of formulas that are difficult to understand, and the abstract nature of the material that is difficult to solve (Baiduri et al., 2019). As a result, many students think that mathematics is a complex discipline to understand, which creates a negative perception that ultimately affects their interest in learning mathematics (Baiduri et al., 2019).

As a teacher, it is essential to have creativity and innovation in delivering math materials to students. A strategy to be creative and innovative is to utilize various learning media to increase the effectiveness of learning. However, in general, teachers still rely on teacher's books as the only source of knowledge. Learning media has an essential role in delivering information during the teaching and learning process and has been proven to provide many benefits, especially in Indonesia's education context (Muthoharoh & Sakti, 2021). Learning media has been proven to motivate students in the learning process in the classroom and make learning more accessible and enjoyable for students (Khairi et al., 2023).

However, the results of observations and interviews at SD Negeri 054949 Sei Meran, Pangkalan Susu District, show several problems in teaching and learning activities in mathematics. Students need more understanding of learning materials, especially fractions, and must be more responsive to receiving materials. This is triggered by learning that is still centered on the role of the teacher, so students look less focused and tend to get bored while participating in the learning process.

More learning media must support math learning at SD Negeri 054949 Sei Meran, Pangkalan Susu Sub-district. Currently, math learning only relies on textbooks as teaching materials. However, textbooks tend only to attract students' interest if they are thick, have a lot of writing, have few pictures, and have a larger font size. As a result, using textbooks is considered less attractive and boring for students. This finding proves that the use of various learning tools can be a solution to increase the interest and quality of mathematics learning. Developing more favorable and interactive teaching materials can improve students' sympathy in the learning process and deepen their understanding of the subject matter.

The solution proposed to answer the problem is the development of innovative learning tools to change the learning process of mathematics to be more expressive and preferred by students. One of the solutions found is the development of math booklets as a reference source for learning mathematics in the classroom (Aswirna et al., 2020). Booklets are a substitute for a small book containing interactive images and a brief and clear explanation of the material. The advantage of the Booklet lies in its attractive design, which has fewer pages to attract students' attention to read it. In addition, the practicality of the Booklet is also an added value because it is easy to carry and can be accessed at any time (Ningsih, 2023).

This observation uses a Research and Development (R&D) approach, with the Analysis-Design-Develop-Implement-Evaluate (ADDIE) development model developed by Reiser and Mollenda. A study by Milandari et al (2023) focused on developing mathematics booklet learning media for grade VI SD. This research involved validation tests by media, language, and material experts, as well as the implementation of mathematics booklets for grade VI students of SD Negeri Sukabela. The results concluded that the math booklet device was rated valid by the Expert team with an overall percentage of 83% and received positive feedback from students with 82%. Thus, the math booklet is considered one of the valid and effective alternatives for learning mathematics in grade VI.

Observations made by Intika (2018) "Development of Science for Kids Booklet Media as a Learning Resource in Elementary Schools," is also a Research and Development (R&D) study that draws on Borg and Gall's theory. This study aims to evaluate the need to improve booklets' quality, estimate booklets' feasibility, assess student responses, and analyze student learning outcomes through booklets. The observation concluded that both teachers and students gave positive responses to the use of the Booklet. The validity assessment by material and media experts resulted in an average score of 3.28, considered very good or adequate for use. Learners also gave excellent responses with a mean score of 9.26%, while the passing rate of student learning outcomes reached 84.5% in the trial use.

The study results conclude that the Science for Kids booklet media is practical and feasible for improving student learning outcomes. This device was developed to meet the needs of teachers and students and can produce a knowledgeable and realistic learning environment by involving active students during the learning process (Silvia et al., 2023). The conclusion of the observation shows that the use of booklet learning tools has a positive impact on improving student learning. This study underscores the importance of utilizing innovative learning media, such as booklets, in carrying out efficient and attractive learning activities for students (Intika, 2018) In future research Amalia et al (2024) highlighted the different approaches to utilizing booklet learning media in Mathematics. They emphasized the need to explore booklets further as a learning tool in material absorption and evaluating the material delivery process.

B. Method

This research was conducted at SD Negeri 054949 Sei Meran, Pangkalan Susu District, in the 2023/2024 school year, involving all grade IV students with a total of 25 as research subjects. These fourth-grade students became the object of research used for small or limited trials. This research aims to improve booklet learning tools in math subjects. The research design used is a research and development design. This model targets validating and developing products, as Borg and Gall described in Sugiyono. The research model leads to the ADDIE model development model, namely Analysis-Design-Develop-Implement-Evaluate, developed by Reiser and Mollenda in the 1990s (Meishanti, 2021).

The methods used to collect data in this observation include interviews, documentation, and questionnaires. The instrument used included a product validation questionnaire by experts (material, language, and media) to assess the feasibility of the math book after being used in learning activities. In addition, response questionnaires from teachers and participants were also used. The stages of developing this Booklet follow the ADDIE model, which includes Analysis, Design, Development, Implementation, and Evaluation.



Figure 1. ADDIE Stages

Table 1. Questionnaire Instrument for Material Experts

No	Aspect	Indicator
1	Content considerations	Relevance of the material
		Content validity
		Way of presentation
		Suitability of media with teaching materials
		Relevant

The material expert approval questionnaire was used to assess the accuracy and clarity of the material in the booklet media. By seeking approval from material experts, researchers can correct and improve the quality of the material content in the Booklet, especially in the context of mathematics learning.

Table 2. Questionnaire for Media Design Expert

No	Criteria	Indicator
1	Design Aspects	Display and design Position
		Media size
		Animation or image suitability
		Color variation
		Appearance of images, photos, and graphics
		Correlation of design and material
		Accuracy of reading location
		Consistency of design form
2	Physical Appearance	Relevance of media size to the content of the material
		The cover display represents the content
		Cover appeal
		Lay out of print and binding.
		Efficient use of font combinations (Fonts)
		Appropriateness of font size

(Source: [Arifin, 2017](#))

The media expert validation instrument is used to evaluate the Booklet media to identify and reduce errors that may exist in the media. Through the assessment of media experts, researchers can obtain valuable input to improve the quality and effectiveness of the Booklet media that has been developed previously.

Table 3. Questionnaire for Language Experts

No	Aspect	Indicator
1	Straightforward	Sentence format accuracy
		Sentence weight
		validity of terms
2	Communicative	Interpretation of information
3	Dialogical and communicative	Ability to encourage learners
		Ability to encourage critical thinking
4	Suitability to learner	Correspondence with intellectual improvement of learners.

	development.	Match with the level of emotional enhancement learners
5	Conformity with language rules	Language accuracy
6	Use of terms, symbols, or icons.	Precision of Pronunciation
		Consistency of terms
		Analogy use of symbols or icons

The language validation questionnaire was used to identify incorrect formal and informal words in the developed educational materials. The aim was to get feedback from the validators on making the language more effective and in line with standards in the academic context. Thus, researchers can improve and refine the materials to make them easier to understand and more aligned with learning needs.

Table 4. Instrument for Teacher Response

No	Indicator	Aspect
1	Media	Booklet media form
		Use of Booklet learning tools
2	Teaching Materials	Material delivery
		Readiness to learn
3	Influence	Interest in using Booklet media
		Development of learning motivation

The function of this tool is to evaluate the practicality of booklet learning media in the context of Mathematics study. Therefore, the author needs corrections and feedback from teachers as part of the process of developing and improving this booklet media.

Table 5. Instrument for Student Responses

No	Indicator	Aspect
1	Media	Form of the Booklet tool
		Usage of Booklet learning tool
2	Teaching materials	Presentation of teaching materials
3	Education	Education condition
		Student feedback

This student response instrument is intended to evaluate the practicality of the development of booklet media. This instrument was given to students after they completed the product trial.

Table 6. Likert Scale Scoring Guide on Expert Validation Questionnaire

Description	Score
Very good	5
Good	4

Medium	3
Bad	2
Very bad	1

(Source: [Ravilla et al., 2022](#))

The scoring of the research results can be determined based on the assessment of the validators and practitioners, where scores 1 and 2 are in the "very bad" category, score 3 is in the "medium" category, score 4 is in the "good" category, and score 5 is the highest in the "very good" category.

The validity of Booklet-based learning media can be ensured when material, media, and language experts state that the media meets the requirements needed to achieve the appropriate validity analysis value and is close to the ideal score. To assess validity, a formula is used that considers the assessment of these experts. As follows:

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

Description:

P = percentage of validity

F = Score achieved

N = maximum score

Furthermore, to simplify the calculation, it can be seen below the qualifications that can be presented in the table as follows:

Table 7. Percentage of Validity

Percentage	Interpretation
81-100%	Very Valid
61-80%	Valid
41-60%	Moderately Valid
21-40%	Less Valid
0-20%	Not Valid

(Source: [Septiani & Okmarisa, 2023](#))

In assessing the validity of learning media, validation results are essential in determining its quality. The range of validation results can guide how well a learning media meets the set standards. The range is divided into five categories based on the percentage of validation results. First, if the validation result is 0-20%, the learning media is categorized as "invalid". Furthermore, if the results are between 21-40%, the media is considered "less valid". The 41-60% range indicates that the learning media has reached the "sufficient" level of validity. Meanwhile, 61-80% range validation results indicate that the media can be categorized as "valid". Finally, if the validation result reaches 81-100%, the learning media is considered "highly valid", indicating that the media meets the validity standard optimally. Thus, understanding the validation results is essential in evaluating the quality of a learning media.

Table 8. Likert Scale Categories on Practicality Questionnaire

Description	Score
Strongly Agree	5
Agree	4
Disagree	3
Disagree	2
Strongly Disagree	1

(Source: [Wakhyudin & Permatasari, 2017](#))

The assessment of the research results is based on the scores given by the validators and practitioners. The scores given have a precise range of interpretation, where score 1 indicates the "strongly disagree" category, score 2 indicates the "disagree" category, score 3 indicates the "less agree" category, and score 4 indicates the "agree" category. Score 5 is the highest, indicating the "strongly agree" category. In analyzing the data from the response questionnaire, the formula used is as follows:

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

Description:

P = percentage of validity

F = number of scores obtained

N = maximum score

Furthermore, to simplify the calculation, it can be seen below the qualifications that can be presented in the table as follows:

Table 9. Practicality Percentage

Percentage	Interpretation
81-100%	Very Practical
61-80%	Practical
41-60%	Moderately Practical
21-40%	Less Practical
0-20%	Not Practical

(Source: [Septiani & Okmarisa, 2023](#))

From the table presented, the results of the validity of learning media can be categorized based on a specific percentage range. If the validity percentage is 0-20%, the learning media will be classified as "impractical". The 21-40% range will categorize the press as "less practical", while the 41-60% range will get the "quite practical" classification. If the validity percentage is 61-80%, the media will be categorized as "practical"; if the validity percentage reaches 81-100%, the learning media will be classified as "very practical".

C. Result and Discussion

Result

After the validity assessment, the trial was conducted on 25 grade IV students at SD Negeri 054949 Sei Meran, Pangkalan Susu District. The development of this learning media follows the ADDIE model, which includes the steps of analysis, design, development, implementation, and evaluation.

Analysis Stage

a. Needs Analysis

The process began by collecting data through observations and interviews with the fourth-grade teacher of SD Negeri 054949 Sei Meran Kec. Pangkalan Susu, named Mrs. Armaini, S.Pd. The results of the interview showed that students tend to need help understanding math materials, especially in understanding fractions. Learning in the classroom is still centered on the role of the teacher, and it can be seen that many students need to be more focused and look more energized when participating in learning. In addition, teaching media that support the mathematics learning process at SD Negeri 054949 Sei Meran Kec. Pangkalan Susu is still not available. The teaching materials used are limited to package books only. However, thick textbooks tend to make students less interested because there is too much text, few pictures, and too small font size. As a result, learning mathematics using textbooks is considered boring and less attractive for students.

b. Curriculum Analysis

This research includes curriculum evaluation, where the review aims to assess the relationship between the type of device (media) developed and the subject matter, specifically the curriculum applied at SD Negeri 054949 Sei Meran, Pangkalan Susu District for grade IV students, which adopts the Merdeka Curriculum program. The initial stage in this analysis is to compile learning outcomes and learning objectives that will be integrated into the Booklet media. The following are learning outcomes and objectives focusing on fractions worth in math subjects.

Learning Outcomes:

The learning target is for students to compare and order fractions with one numerator and between fractions with the same denominator. In addition, they are expected to be able to identify equivalent fractions using pictures and mathematical symbols.

Learning Objectives:

1. Students are expected to deepen their understanding of fractions.
2. Students are expected to be able to determine fractions having the same value correctly.
3. Students are expected to be able to compare fractions with the same denominator.
4. Students are expected to be able to answer questions related to fractions well and correctly.

c. Material Analysis

The teaching materials used in this study have been analyzed to find appropriate materials. This study uses fractions worth material, usually taught in semester 2 of grade IV. The material presented in the Booklet is organized concisely, clearly, and easily understood. In addition, many pictures are included to make the Booklet seem more attractive to students.

Design Stage

The planning stage is the design of the learning media. The planning stage consists of two stages, namely:

Preparation of Product Design

At this stage, teachers and students of grade IV elementary school use existing Mathematics books to compile learning materials. After the material is compiled in the learning media, the next step is to design the booklet media product design. During the process of making the Booklet, organizing the material systematically and excitingly, as well as paying attention to the needs of students and design principles that are effective in conveying information, the following are the preparation steps:

- a. Preparing teaching materials in learning media.
- b. Providing Canva Design application for Booklet creation.
- c. Determining the design theme, color, and interactive writing style will be used.
- d. Searching for exciting elements to decorate the booklet template by selecting the element menu and then typing what is needed.
- e. Inserting teaching materials in the Booklet created.
- f. After the design stage, download the Booklet as learning media.
- g. Printing three copies of booklets as validation material for validators before printing booklets for small-scale trials.

Development

This is a follow-up to the design stage planned to produce booklet learning media. At this stage, the product must be printed and undergo a validation test to ensure this media can be used. The following is the procedure carried out at the development stage:

1) Product Manufacturing

After the booklet media design is complete, the physical design and content of the book are printed with a model that nails and a variety of contrasting colors. The book cover page uses images that are relevant to the material. The choice of title, image, and color for the book page cover was made to attract students' attention when they opened it. The chosen book cover is also explicitly designed to attract students' attention. The book's cover page uses a photo of several children eating pizza to select a book cover based on a beige color

with a combination of orange colors in its elements. In the large sub-section of the cover page, the title "Booklet" appears. Below the sub-title is a discussion of the material "Fractions". Display Distillery uses 100 pt font.

Furthermore, the class name is on the Booklet's bottom cover page with an A4 book size (210 mm x 297 mm). In addition, there is information about the book cover page; the Booklet is made of 260 gsm thick art carton paper and is A4 in size, as well as the contents of the book, full-color art paper (colored Booklet), which is 150 gsm thick and has a spiral. The following is the Booklet learning media that has been developed.



Figure 2. Display of Developed Teaching Materials

2) Media Validation

A team of material, media, and language experts will validate teaching materials. The validation process aims to evaluate the quality of learning media in terms of material, language, and overall presentation. The validation results by the validator team will be the basis for identifying deficiencies and improving the teaching materials that have been made. Evaluation targets by the validation team include:

Table 10. Teaching Material Media Validator

No	Name	Validator
1	Sri Wahyuni, M. Pd	Material expert
2	Karina Wanda, M. Pd	Media expert
3	Amin Basri, M. Pd	Language expert

From this table, some validators are responsible for validating the Booklet media development. They are Mrs. Sri Wahyuni, S.Pd., M.Pd., who acts as a material expert validator; Mrs. Karina Wanda, M.Pd., as a media expert validator; and Mr. Amin Basri, M.Pd., who serves as a language expert validator. The following are the results of the product validation test by experts:

Table 11. Expert Validation Test Results

No	Expert	Percentage	Criteria
1	Media	98,57%	Very Valid
2	Language	95%	Very Valid
3	Material	93,33%	Very Valid

The learning media that has been designed has passed the validation process well. Validation was conducted once for media design, twice for language aspects, and twice for material aspects. The validation results show that the media obtained a high percentage of validity. Specifically, for the material justification aspect, the learning media received a validity percentage of 93.33% with the interpretation of "Very Valid". Meanwhile, for the media design aspect, the validity percentage obtained was 98.57% with the interpretation of "Very Valid". Furthermore, for the language validation aspect, the learning media obtained a validity percentage of 95% with the interpretation of "Very Valid". This shows that the booklet learning media has successfully passed the validation process and can be considered valid.

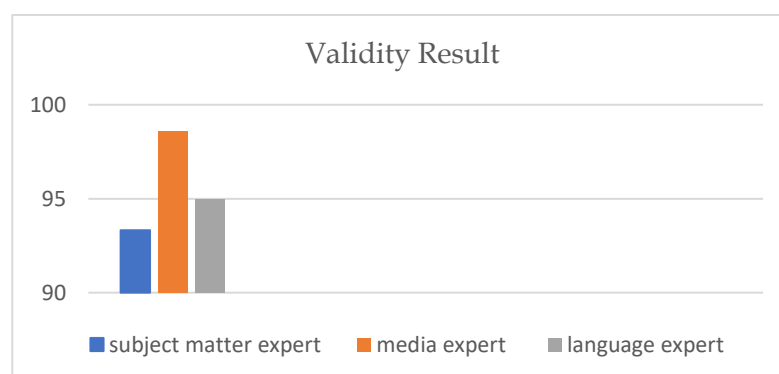


Figure 3. Graph of Validation Results from Material, Media Design, and Language Experts

The percentage chart shows the validity of the booklet media development results from the three material experts, media and language experts.

Implementation Stage

The steps were carried out carefully while validating the practicality of teacher and student responses. The teacher introduces the Booklet media to students, explains the purpose of its use, and provides clear instructions on how to use it. The implementation of learning is carried out by directing students to use the booklet media in the learning process actively. The teacher carefully monitors students' responses to the media through direct and visual observation. After learning, teachers and students are asked to complete an evaluation questionnaire assessing their experience using the Booklet media. The questionnaire results were carefully evaluated to determine how practical the Booklet media is in learning. Next, teachers and researchers conducted an in-depth analysis of the evaluation results, identifying the strengths and weaknesses of the Booklet media and providing input for necessary evaluations to improve the quality of its use in the future. The following activities were carried out:



Figure 4. Students Learning Using Learning Media Booklet

Table 12. Teacher Response Practicality Results

Total Skor	Percentage	Criteria	Practicality Level
52	87%	81-100%	Very Practical

Based on Table 12. According to the practicality results of the Booklet media, the highest score obtained is a percentage score of 87% with a practicality level of "Very Practical".

Table 13. The Practicality Results of Student Responses

Total Score	Percentage	Criteria	Practicalzity Level
1.756	94%	81-100%	Very Practical

Based on the results of the practicality of the Booklet media, the highest score was obtained by a percentage score of 94% with a practicality level of "Very Practical".

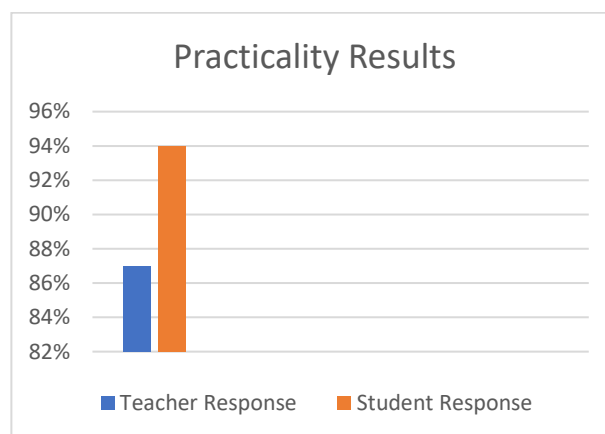


Figure 5. Graph of the level of practicality of Booklet Teaching Materials for Teacher and Student Responses

Graphs of students' and teachers' responses to using Booklet teaching materials in learning Mathematics have been compiled to measure the level of practicality and effectiveness of the media. The graph includes an assessment of students' enjoyment, motivation, and interest in learning while using the Booklet and the ease of understanding the material and the teaching and learning process.

The priority target of this research is to create teaching media products in the form of booklets that are not only academically valid but also practical. This Booklet was created using the Canva application and adapted to the teaching and learning activities needs of SD Negeri 054949 Sei Meran Kec. Pangkalan Susu.

The importance of Booklet media can be seen from its ability to adapt to the characteristics of students, attract their attention through the use of colors, images, and exciting writing, and be easy for teachers to use. Because no matter how good a learning media is, its benefits will be limited if the teacher can use it effectively. Thus, teaching materials can be a tool in delivering material effectively to students. According to the results of research conducted by [Milandari et al \(2023\)](#) regarding the development of Booklet Math media for grade VI Mathematics subjects, the press is considered valid and feasible for use in learning, with an overall percentage of 83%. Positive responses were also obtained from students, who assessed 82% of the media's usefulness in education. Thus, it can be concluded that Booklet Math media is perfect and suitable for learning Mathematics in grade VI SD.

Another study conducted by [Intika \(2018\)](#) regarding the improvement of Science For Kids Booklet media also found similar findings. Teachers and students gave a positive response to the use of the Booklet. The results of booklet product validation by material and media experts showed an excellent average score, reaching 3.28. Students' responses to the media were also very positive, with an average score of 9.26%. In addition, student learning outcomes reached a relatively high level of completeness, namely 84.5%. Therefore, the

Science For Kids Booklet tool is practical, feasible, and can improve student learning outcomes by learning and teaching needs.

Research conducted by Asa Pratiwi and colleagues in 2022 with the title "Development of Booklet Media on the Material of the Properties of Flat Buildings to Improve Understanding in Grade 3 Elementary School Students" also found results that were in line with other studies. The study results showed that the booklet device developed met the criteria of validity, practicality, and impact. In the validity aspect, the booklet media received a construction value of 86.25%, material validity of 85.45%, language validity of 90%, and question validity of 75%. In addition, the media was also considered practical, with a percentage of 86.66%. Student learning outcomes also reached a very high level of learning completeness, namely 100%. Thus, the booklet tool is valid, practical, and effective in learning the properties of flat shapes in grade 3 elementary school.

Discussion

This research successfully developed learning media as booklets for mathematics subjects at the elementary school level. The Booklet contains information about fractions and exciting pictures to facilitate student understanding. Developing this booklet media follows the ADDIE model, which includes the stages of analysis, design, development, implementation, and evaluation.

Before being tested in the field, this booklet media has passed the validation process by expert material, media, and language lecturers to get the necessary suggestions and input. The validation results show that this booklet media is very valid regarding design, material, and language.

In addition, the results of practitioner trials by teachers also showed that this booklet media was efficient in use, with the highest score reaching 87%, indicating a very high level of practicality. The results of the trial students also produced a high score, with a practicality level reaching 94%, indicating that this booklet media is efficient and can facilitate the learning process for students.

This research aims to develop teaching media products in the form of booklets for Mathematics subjects that meet valid and practical criteria. This media was designed using the Canva application based on the needs of teachers and students at SD Negeri 054949 Sei Meran, Pangkalan Susu District. This booklet media must be based on the characteristics of students, attract attention with striking colors, images, and writing, and can be adjusted to the teacher's ability so that it can be used effectively.

The results showed that using booklet media as a teaching aid in schools can make it easier for teachers to deliver the material. In addition, this booklet media is also proven to be feasible to use in elementary schools in various subjects, and this is supported by the results of previous studies such as those conducted by [Milandari et al \(2023\)](#) in the development of mathematics booklet media for grade VI elementary school, [Intika \(2018\)](#) in the development of science booklet media for elementary school children, and Asa Pratiwi and colleagues in 2022 in the development of booklet media on the material of the properties

of flat shapes for grade 3 elementary school. The findings of these studies show that booklet media has a high level of validity and practicality, so it is feasible to be tested in the field.

This study concludes that using booklet media in learning Mathematics, especially fraction material, has been proven valid and practical. The booklet media helps teachers deliver the material effectively and efficiently while improving students' learning conditions effectively and practically. Effectiveness can be seen from the increase in students' understanding of learning, while practicality can be seen from the ease of using this media in the learning process.

From the research conclusions, teachers need to consider several implications. First, teachers must have qualified knowledge and skills in choosing suitable learning materials to increase student involvement and facilitate understanding of the subject matter. In addition, using booklet media in learning mathematics can make the material more accessible for students to understand and increase students' interest in the subject.

Future research should focus on schools that need learning media, models, and methods that suit their needs. In addition, future research can involve more diverse materials, subjects, and objects to gain a more comprehensive understanding of the use of booklet media in an educational context.

D. Conclusion

This study concludes that the use of booklet media in learning Mathematics, especially in fraction material, has been proven valid and practical. The booklet media helps teachers in delivering the material effectively and efficiently, while also being able to improve students' learning conditions effectively and practically. Effectiveness can be seen from the increase in students' understanding of learning, while practicality can be seen from the ease of using this media in the learning process.

From the research conclusions, there are several implications that need to be considered by teachers. First, it is important for teachers to have qualified knowledge and skills in choosing the right learning materials to increase student involvement and facilitate understanding of the subject matter. In addition, the use of booklet media in learning mathematics can make the material easier for students to understand and increase students' interest and attraction to the subject.

For future research, it is recommended to focus on schools that need learning media, models, and methods that suit their needs. In addition, future research can involve more diverse materials, subjects, and objects to gain a more comprehensive understanding of the use of booklet media in an educational context.

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