DEVELOPING FLIPBOOKS TEACHING MATERIAL BASED ON LOCAL WISDOM IN IMPROVING YOUNG LEARNERS' WRITING SKILLS OF DESCRIPTIVE TEXTS

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Article Info	Abstract
Article History Accepted: June 2024 Fixed: August 2024 Published: January 2025 **Keywords** Flipbook media; Local wisdom; Writing skills; Learning outcomes; Description texts;	*The environment is the main source of learning. The ability of students to understand the descriptive texts and writing these is still low. The use of teaching materials in learning is less close to student life. The availability of learning resources is still limited. Students can read but have not been able to understand the content of the material. This study aims to determine the feasibility and effectiveness of flipbook teaching materials based on local wisdom in improving learning outcomes by analyzing the description text of grade V elementary school students. The method in this study uses the type of Research and Development (R&D) research with the Borg and Gall development model. Product validity tests are carried out with material expert validators and media expert validators. The results of this study showed that the results of the media feasibility test obtained were 93.75% with a very feasible predicate and the feasibility test results from material experts were 93.75% with a very feasible predicate. The results of large-scale usage trials showed an increase from pretest to posttest with an average N-Gain of 0.4 and significance (2-tailed) of 0.000 < 0.05. Flipbook teaching materials display designs and materials conceptualized according to the local wisdom of the Tegal Regency. The conclusion of the results of this study shows that flipbook teaching materials based on local wisdom are declared feasible and effective in improving learning outcomes by analyzing the decriptive texts.*

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INTRODUCTION

Digital technology has become an integral element in modern life, influencing both the school environment and society at large. Education, equally significant, serves as a deliberate human effort to acquire knowledge, skills, and values through formal and non-formal processes. These two aspects must harmonize to foster the development of quality human resources. Education plays a transformative role by shaping self-potential through a dynamic learning process, which involves the interaction between students, educators, and effective learning resources within conducive environments (Wulandari, 2020).

The learning process necessitates careful preparation, including the provision of adequate facilities and infrastructure to support educational activities in schools. Among the essential components are teaching materials, which encompass facts, concepts, principles, procedures, and problems that must be communicated to students (Isnaini, 2021). Teaching materials act as primary sources of knowledge and insight, yet their availability across Indonesia remains uneven, creating significant disparities in the teaching-learning process. Conventional teaching materials also face limitations, such as their perishable nature, monotonous content, bulkiness,

and diminished appeal to students. Addressing these issues calls for the development of innovative and technology-integrated teaching materials.

Effective teaching materials should align with predefined learning objectives and cater to student needs. The integration of digital technology into teaching materials can address the shortcomings of conventional resources. Digital teaching materials provide educators with easy access to engaging content that fosters an enriched and interactive learning experience (Utami & Atmojo, 2021). By leveraging technology, educators can create more appealing and effective educational tools, enabling students to explore diverse perspectives and gain practical knowledge. The learning environment is another crucial factor in determining the success of educational processes. An adequate and resourceful learning environment enhances the relevance and appeal of learning, making it more engaging and meaningful for students. Utilizing the surrounding environment as a learning resource can produce knowledge that is applicable to real-life situations. Students benefit from observing practical examples that connect classroom concepts to their immediate surroundings, thereby enriching their understanding and application of knowledge (Khadijah et al., 2022). However, many educators fail to integrate the surrounding environment into their teaching, limiting students' opportunities to relate academic material to their daily lives (Memet, 2020).

Indonesian language education aims to develop students' knowledge, skills, creativity, and attitudes (Ekawati & Pohan, 2023; Afifah & Atmazaki, 2024). It emphasizes the ability to understand and use Indonesian for effective oral and written communication. At the Phase C Primary School level, one crucial learning objective is analyzing information within descriptive texts. Reading is a critical cognitive process in this context, requiring students to extract explicit and implicit information from written content. Reading activities demand high levels of concentration and accuracy to comprehend the nuances of the text (Dalman, 2017). In analyzing descriptive texts, students are expected to evaluate, investigate, and explain the information presented.

Observations and interviews conducted with Grade V teachers revealed that students struggled to analyze information in descriptive texts. This challenge was evident from students' performance on assessments related to distinguishing facts and opinions within such texts. The results indicated that only 35.7% of students met the minimum learning criteria (KKTP), with an average score of 65.78 against a target of 70. Factors contributing to these outcomes included students' lack of interest, difficulties in maintaining concentration, and teaching materials that were not closely connected to students' lives. Additionally, the absence of suitable teaching models and the lack of differentiated instruction to accommodate students' diverse abilities further hindered learning outcomes.

Introducing material content rooted in students' surrounding environment presents an effective solution to these challenges. The integration of technology and local wisdom into teaching materials has the potential to enhance students' engagement and understanding. Digital teaching materials, such as flipbooks based on local wisdom, provide innovative ways to connect academic content with students' lived experiences. By leveraging technology, educators can offer visually appealing and interactive resources that capture students' interest and facilitate meaningful learning experiences (Rubio-Tamayo et al., 2017).

Local wisdom, shaped by generations of adaptation to the environment, serves as a valuable educational resource. By incorporating elements such as local traditions, cultural practices, natural tourism, and regional cuisine into teaching materials, educators can make learning more relevant and impactful for students (Juniarta et al., 2013). For instance, introducing Tegal's local wisdom through flipbook teaching materials allows students to explore their cultural heritage while enhancing their literacy skills. Such an approach bridges the gap between academic concepts and students' everyday realities, fostering a deeper appreciation for their community and environment.

Previous research underscores the efficacy of digital teaching materials in improving educational outcomes. For example, studies on flipbooks have demonstrated their potential to enhance character education and provide meaningful learning experiences. Zahra (2024) found that flipbook-based learning media significantly improved elementary students' engagement and academic performance. Similarly, studies on picture books and digital media, such as pop-up books, highlight their effectiveness in fostering student interest and comprehension (Permani, Saputra, & Sobri, 2024; Mutiara & Hardjono, 2023). These findings emphasize the value of digital tools in creating engaging and effective learning environments.

This research focuses on developing flipbook teaching materials based on Tegal's local wisdom to improve learning outcomes in analyzing descriptive texts. The study aims to evaluate the feasibility and effectiveness of these materials in enhancing students' ability to distinguish facts and opinions within descriptive texts. By connecting academic content to local culture and utilizing interactive digital formats, the flipbooks are designed to address the limitations of conventional teaching materials and meet the diverse needs of students. The integration of local wisdom into teaching materials offers several benefits. First, it enhances students' understanding of their cultural heritage, fostering a sense of identity and belonging (Dewi & Wibawa, 2024; Shin et al., 2011; Irwan et al., 2024). By engaging with familiar contexts, students can relate academic content to their personal experiences, making learning more meaningful and memorable. Second, local wisdom-based materials promote the development of critical thinking and analytical skills. By analyzing real-life examples from their surroundings, students gain practical insights that extend beyond the classroom. Third, incorporating local wisdom into teaching materials supports the preservation and appreciation of cultural traditions, ensuring that future generations remain connected to their roots.

In addition to cultural relevance, the use of digital formats, such as flipbooks, addresses several challenges associated with traditional teaching materials. Flipbooks offer portability, durability, and interactive features that enhance the learning experience (Dewi & Wibawa, 2024; Irwan et al., 2024). They can include multimedia elements such as images, audio, and animations, making content more engaging and accessible for students. Moreover, digital teaching materials can be easily updated and distributed, ensuring that educators have access to the latest resources aligned with curriculum requirements. The development of flipbook teaching materials based on local wisdom aligns with broader efforts to integrate technology into education. As digital tools become increasingly prevalent, their potential to transform teaching and learning practices continues to grow. By harnessing technology, educators can create inclusive and equitable learning environments that cater to the diverse needs of students. Furthermore, the use of digital materials supports the development of 21st-century skills, such as digital literacy, critical thinking, and collaboration, preparing students for success in a rapidly evolving world.

The integration of digital technology and local wisdom into teaching materials represents a promising approach to enhancing educational outcomes. By addressing the limitations of conventional resources and connecting academic content to students' lived experiences, digital teaching materials offer a pathway to more engaging and effective learning. The development of flipbook teaching materials based on Tegal's local wisdom demonstrates the potential of this approach to improve students' literacy skills and foster a deeper appreciation for their cultural heritage. This research contributes valuable insights into the feasibility and effectiveness of digital teaching materials, providing a foundation for future innovations in education.

RESEARCH METHODS
Research Design
This study employs the Research and Development (R&D) method, which is designed to create new products or improve existing ones to enhance their quality and effectiveness. Sugiyono (2022: 407) describes development research as a systematic method for producing

and evaluating the effectiveness of a product. Products developed through this approach undergo a series of stages to ensure they are effective and suitable for use. In this study, the product developed is flipbook teaching materials based on local wisdom, specifically tailored for teaching Indonesian facts and opinion materials in descriptive texts. The feasibility of the developed product is evaluated by validators, including material experts, media experts, and linguists. To assess the effectiveness of the flipbook teaching materials, the study analyzes students' cognitive learning outcomes through normality tests, t-tests, and N-gain tests.

The development process in this study follows the Borg and Gall model, as adapted by Sugiyono (2022: 404), which outlines ten stages: identifying potential and problems, collecting data, designing the product, validating the design, revising the design, conducting product trials, revising the product, conducting usage trials, revising the design again, and finally, producing the product for mass use. Due to time and cost constraints, this research implemented only eight of these stages. These stages allowed the researchers to systematically address the development and refinement of the flipbook teaching materials while maintaining focus on their feasibility and effectiveness within the given constraints.

Research Participants

The participants in this research comprised 28 elementary students from Dukuhjati Kidul. For small-scale trials, the researchers employed purposive sampling, a technique in which participants are selected based on specific criteria or considerations (Sugiyono, 2022: 133). To ensure a balanced representation, the researchers selected two high-performing students, two average-performing students, and two low-performing students based on their cognitive abilities. This approach allowed the product trials to address the needs and abilities of students across different academic levels, ensuring the material's suitability and effectiveness for diverse learners. For large-scale trials, the study included a sample of 22 students. This phase aimed to test the effectiveness of the developed teaching materials with a broader group, providing insights into their applicability and impact on a larger scale. By involving a diverse and representative sample, the researchers ensured that the findings would reflect the material's overall effectiveness and suitability for elementary students.

Research Instruments

The instruments used in this research comprised questionnaire sheets and interview sheets, carefully designed to collect relevant data from participants. The questionnaires aimed to gather quantitative data by assessing participants' perceptions, experiences, and feedback on the teaching materials, while the interview sheets facilitated the collection of qualitative insights through in-depth discussions. Together, these instruments provided a comprehensive understanding of the effectiveness and feasibility of the developed teaching materials. To ensure the reliability and accuracy of the data collected, the validity of the research instruments was thoroughly evaluated. The instruments underwent a content validity process, which involved assessing whether the questions and items effectively represented the constructs being measured. This process was guided by expert validators who reviewed the instruments for clarity, relevance, and alignment with the study's objectives. The content validity assessment ensured that the instruments were capable of capturing meaningful and accurate data that directly related to the research questions. By employing validated instruments, the researchers strengthened the credibility and reliability of their findings. The use of both quantitative and qualitative tools allowed for a more nuanced and comprehensive analysis, contributing to a deeper understanding of the impact and applicability of the flipbook teaching materials in the educational setting.

Data Analysis

The data analysis in this study comprises three key stages: product data analysis, initial data analysis, and final data analysis. The product data analysis focuses on evaluating the

feasibility of the developed teaching materials and analyzing teacher responses. Material feasibility is assessed using expert validation of the local wisdom-based flipbook teaching materials, with evaluations based on media and material validation criteria. The percentage scores obtained from expert validators are interpreted against a classification of assessment results to determine the feasibility of the teaching materials. Additionally, teacher responses collected through questionnaires after using the teaching materials are analyzed to gain insights into their effectiveness and usability.

The initial data analysis aims to establish baseline information for determining differences and average increases in learning outcomes. This involves a normality test conducted on the pretest scores obtained before using the local wisdom-based flipbook teaching materials and the posttest scores gathered after their use. The normality test is performed using the Shapiro-Wilk formula, facilitated by SPSS version 25 software. The test criteria dictate that a significant value greater than 0.050 indicates normally distributed data, while a value less than 0.050 signifies non-normal distribution. This step ensures the validity of the data for subsequent statistical analyses.

The final data analysis encompasses a mean difference test (t-test) and an average increase test (N-gain test). The paired sample t-test is employed to determine whether there is a significant difference between pretest and posttest learning outcomes. A significant value (sig. 2-tailed) less than 0.05 indicates a meaningful difference, whereas a value greater than 0.05 suggests no significant difference between the two sets of scores. To further assess the impact of the teaching materials, the N-gain test measures the normalized gain. This involves comparing the difference between pretest and posttest scores to the difference in the Ideal Maximum Score (SMI) for the fact and opinion material in Indonesian lessons. The N-gain calculation provides a standardized metric to evaluate the effectiveness of the flipbook teaching materials in improving student learning outcomes.

RESEARCH RESULTS AND DISCUSSION
Research Results

The first stage is potential problems. At this stage, researchers search for information about the condition of students, teachers, and schools that are the research sample. The activity was carried out through observation and interviews with teachers and grade V students. In addition, documentation is carried out to prove the data obtained. The potential and problems raised in the study must be proven by empirical data. Problems were found in Indonesian learning in the form of teaching materials used that were not close to students' lives, causing students' lack of understanding of the material facts and opinions in the description text. This is evidenced in the results of student learning in English subjects Indonesian the material of facts and opinions in the description text obtained an average score of 62.5. This score shows that the student's ability is still below the KKTP, which is 70.

The second stage is data collection. This activity is carried out through teacher needs analysis, curriculum analysis, and analysis of teaching materials related to the product in question. The results of the recapitulation of the analysis of teacher needs are as follows.

Table 1
Recapitulation of teacher needs analysis

No.	Teacher Needs
1	Teachers need other media to attract students' attention.
2	Teachers need new books in the form of digital-based teaching materials.
3	The teacher chooses the shape of rectangular teaching materials (*portrait*).
4	Teachers need A4 teaching material paper and > 20 pages thick.
5	Teachers need colored and pictorial teaching materials.
6	Teachers need teaching materials with the font Comic Sans MS.
7	Teachers need material with standard language and varying sentence lengths.
8.	Teachers want the content of the material to be closer to the lives of students.

9.   Teachers want continuity in presenting material with a balanced evaluation of questions.

Table 1 serves as a critical foundation for researchers to determine the specifications of the product to be developed. Once the potential and problems have been factually identified, it becomes essential to gather various pieces of information to inform the planning and development of the product aimed at addressing these issues (Sugiyono, 2022). This initial step ensures that the subsequent design and implementation phases are grounded in a thorough understanding of the challenges and needs.

Building on the data collection stage, researchers conceptualized the development of flipbook-based teaching materials incorporating local wisdom. These materials are designed for application through the Cooperative Integrated Reading and Composition (CIRC) learning model. The flipbooks integrate content evaluation through the AKM class, which assesses students' understanding of facts and opinions in descriptive texts. The material highlights elements of local wisdom from Tegal Regency, including tourist attractions, traditional foods, arts, and natural conditions, providing culturally relevant and engaging content for students.

The digital flipbook teaching materials were created using the Canva application, with the design tailored to meet students' learning needs. The primary goal of this product is to enhance learning outcomes, particularly in analyzing facts and opinions within descriptive texts. The design process emphasizes a user-friendly, visually appealing format that aligns with educational objectives.

The feasibility of the flipbook teaching materials was tested during the design validation phase. Once the product was completed, experts were engaged to evaluate its strengths and weaknesses. This validation process involved material and media experts to ensure the quality and effectiveness of the teaching materials. Material expert validation was conducted by a lecturer in the PGSD program at Semarang State University, while media expert validation confirmed that the flipbooks met high standards and were deemed highly suitable for use in educational settings.

Table 2
Material Expert Validation Assessment Results

No.	Indicators	Score Acquisition
1	Content and purpose	24
2	Language Use	14
3	Learning	18
4	Technical/display	19
Total score obtained		75
Maximum score		80
Percentage		93,75%
Criterion		Very Worth It

Table 2 presents the validation results from material experts for the local wisdom flipbook teaching materials. The assessment scores were as follows: content and purpose indicators received a score of 24, language use scored 14, learning aspects scored 18, and technical indicators scored 19. The total score was 75 out of a maximum of 80, resulting in a percentage of 93.7%, which falls under the "very decent" category. Similarly, the media expert validation assessed the flipbook's quality across several indicators: cover display quality scored 11, content display quality scored 41, and technical quality scored 23. The total score was also 75 out of 80, achieving a percentage of 93.7%, again categorized as "very decent." Material and media validators evaluated the product using validation questionnaires, and the results are summarized in the validation test recapitulation.

The expert validation results were overwhelmingly positive. Material validation achieved a 93.7% score in the "Very Decent" category, and media validation also achieved 93.7%, confirming the high feasibility of the flipbook teaching materials based on local wisdom for

field testing. Following the validation process, design revisions were implemented to address deficiencies identified by the validators. These revisions aimed to improve the product further based on expert feedback, resulting in a more polished and effective design.

The revised flipbook teaching materials were adjusted according to the suggestions from the validators, particularly media experts, leading to enhancements in the visual presentation of the product. The next phase involved effectiveness testing, carried out during the product trial stage. Researchers used purposive sampling to select participants, including two top-ranked students, two middle-ranked students, and two lower-ranked students based on cognitive abilities. The product trials employed a one-group pretest-posttest experimental design, allowing researchers to compare learning outcomes before and after the use of the flipbook teaching materials. This method provided a more accurate evaluation of the flipbook's effectiveness in improving students' understanding of local wisdom and related learning objectives.

Table 3
Small-Scale Cognitive Learning Outcomes

Action	Average	Lowest score	Highest score	The number of students is complete	Percentage (%)
Pretest	64,2	40	90	2	33,3%
Posttest	82,5	70	95	6	100%

Table 3 highlights a significant improvement in student learning outcomes related to analyzing facts and opinions in descriptive texts. This improvement was evident through a comparison of pretest and posttest scores following a small-group trial of the developed teaching materials. Initially, only 2 out of 6 students, representing 33.3%, met the minimum competency criteria (KKTP) in the pretest. However, in the posttest, all 6 students achieved the KKTP, resulting in a 100% completion rate. These results indicate a marked enhancement in students' ability to analyze facts and opinions in descriptive texts after utilizing the flipbook teaching materials based on local wisdom.

The data collected from small-scale trials were further analyzed using N-Gain and t-tests to measure the effectiveness of the materials. The N-Gain test revealed an average increase of 0.59, which falls within the moderate improvement category. This increase demonstrates that the flipbook teaching materials were effective in enhancing students' learning outcomes. Additionally, the t-test results showed a statistically significant difference between pretest and posttest scores, with a sig. (2-tailed) value of 0.003, which is less than the threshold of 0.005. This confirms that the improvement in students' ability to analyze facts and opinions was significant.

Following the small-scale trials, teacher feedback was gathered through response questionnaires to identify any shortcomings or weaknesses in the product. The feedback provided valuable suggestions for refining the flipbook teaching materials to enhance their effectiveness. Teacher responses indicated a strong approval, with the materials receiving a 100% assessment score, classified as "very feasible." After incorporating these refinements based on validation and small-scale trials, the product was deemed ready for larger-scale effectiveness testing.

The effectiveness of the revised flipbook teaching materials was further evaluated through large-group trials, focusing on differences in student learning outcomes before and after their implementation. These trials involved a one-group pretest-posttest experimental design, allowing for a more accurate assessment by comparing pre- and post-treatment conditions. Data from these trials, including pretest and posttest results, were analyzed using normality tests to ensure the reliability of the findings. The results reinforced the effectiveness of the flipbook

teaching materials in improving student outcomes and confirmed their suitability for broader educational use.

Table 4
Large-Scale Cognitive Learning Outcomes

Action	Average	Lowest score	Highest score	The number of students is complete	Percentage (%)
Pretest	62,5	40	80	10	44,4%
Posttest	77,5	70	95	18	82%

Table 4 presents the large-scale cognitive learning outcomes following the use of local wisdom-based flipbook teaching materials. The normality test was conducted to determine whether the data obtained from the population were normally distributed. The analysis employed the Shapiro-Wilk test using SPSS 25 software to assess the normality of the pretest and posttest results. The results of the normality test indicated that the significance value for both the pretest and posttest scores was 0.253, exceeding the threshold of 0.05. This signifies that the data from the large-scale pretest and posttest are normally distributed, satisfying the assumption of normality. Consequently, the null hypothesis (Ho) is rejected, and the alternative hypothesis (Ha) is accepted, confirming that the posttest learning outcomes are normally distributed.

Following the confirmation of normality, a t-test was conducted to analyze the difference in mean scores between the pretest and posttest. The paired sample t-test was used to evaluate the effectiveness of the flipbook teaching materials by comparing the average pretest and posttest scores. This analysis provided further insights into the impact of the local wisdom-based flipbook teaching materials on improving students' cognitive learning outcomes.

Table 5
Test T-test

		Paired Samples Test						
		Paired Differences				t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
					Lower	Upper			
Pair 1	*Pretest - Posttest*	-15.000	6.547	1.396	-17.903	-12.097	-10.747	21	.000

Based on Table 5, the t-test results for the pretest and posttest scores indicate a significance value of 0.000. Since this value is less than the threshold of 0.05, the null hypothesis (Ho) is rejected. This demonstrates a statistically significant difference between the pretest and posttest scores, confirming that the use of local wisdom-based flipbook teaching materials contributed to improved student learning outcomes. The findings further reveal that the average posttest score is higher than the pretest score, indicating a positive impact on student performance.

The N-Gain test was subsequently employed to evaluate the extent of improvement between pretest and posttest scores. This statistical method categorizes the increase in scores into low, medium, or high levels, providing a nuanced understanding of the effectiveness of the teaching materials. By analyzing these categories, the study highlights the degree to which the use of flipbook teaching materials based on local wisdom enhances students' cognitive learning outcomes.

Discussion

Based on pre-research activities conducted, it was observed that the learning resources utilized by teachers are still limited and lack variety. Teachers predominantly rely on teacher books, student books, and supplementary School Electronic Books (BSE). However, the material coverage in these resources is often insufficient, requiring teachers to search for additional relevant content independently. To address these challenges, researchers developed flipbook teaching materials based on local wisdom as an alternative learning resource. This development followed the Borg & Gall research and development procedure, as adapted by Sugiyono (2022), which involves steps such as identifying potential and problems, collecting data, designing and validating the product, revising and testing the product, and conducting usage trials.

The decision to develop teaching materials in the form of flipbooks rooted in local wisdom was based on the positive perception of students regarding their development and utility. According to Roemintoyo (2021), the use of flipbooks in learning enhances student engagement and positively impacts learning outcomes, making it easier for students to comprehend the material (Setiadi et al., 2021). This study integrated local wisdom into teaching materials following the theory of Setiawan et al. (2017), which highlights the importance of incorporating local potential into learning materials to support students in achieving learning objectives. Engaging with learning experiences grounded in local wisdom often results in cognitive improvements, as students are more motivated and can relate the material to their surroundings. Local wisdom carries pedagogical value, fostering beneficial societal behaviors and providing students with appropriate attitudes, knowledge, and environmental awareness. This approach ensures that students can preserve and develop the unique advantages of local wisdom in their regions (Nabila, 2021).

To address the challenges identified, researchers conducted a needs analysis involving teachers and students through questionnaires. The findings revealed that many students face difficulties in understanding material related to facts and opinions in descriptive texts. Both teachers and students agreed that digital teaching materials, such as flipbooks accessible through computers or mobile phones, could significantly enhance the learning experience (Dewi & Wibawa, 2024; Irwan et al., 2024). To ensure relevance and engagement, the material presented in the flipbooks must align with learning outcomes and include vibrant images and colors relatable to students' environments. The language should be clear, concise, and standard, accompanied by usage instructions, glossaries, and evaluation questions. Teachers and students preferred Comic Sans MS font and a portrait layout for the flipbooks, emphasizing ease of use.

Following the needs analysis, researchers gathered content on facts and opinions in descriptive texts and began designing flipbook teaching materials based on local wisdom. The design process adhered to the findings of the needs analysis, aligning with Pertiwi's (2022) assertion that such analyses inform the creation of effective teaching material prototypes. Canva, a design application, was utilized for developing these teaching materials. This application offers teachers an efficient way to design visually appealing and interactive materials that save time while enhancing content delivery. Canva's features, including the ability to integrate text, video, animation, audio, and images, make lessons more engaging and comprehensible for students (Tanjung, 2019; Adnan, 2017). Additionally, the application's attractive interface helps capture students' focus and supports a richer learning experience.

The feasibility of the developed flipbook teaching materials was evaluated by material and media experts using validation instruments. The assessment revealed that flipbook teaching materials based on local wisdom were highly suitable for use in teaching fact and opinion materials in descriptive texts (Van derzwan & Afonso, 2019; Firman et al., 2021; Fadli et al., 2022). Key components such as presentation and content feasibility were validated by experts. The media expert assessment included three indicators with 20 descriptors, yielding a score of

75 and a percentage of 93.75%, categorizing the material as highly feasible. Similarly, material experts assessed content feasibility across four indicators with 20 descriptors, resulting in the same score and percentage. These evaluations confirm that the teaching materials effectively align with learning objectives and outcomes.

The teaching materials are designed to offer engaging content, supported by comprehensive learning media and clear explanations. It is in line with Hwang et al. (2015) who inform that engaging contents facilitate meaningful learning experiences, enabling students to retain and apply the material more effectively. Inamagdalena (2020) found that meaningful learning materials create lasting impressions on students, helping them remember and internalize knowledge that resonates with their experiences. The effectiveness of flipbook teaching materials based on local wisdom was effective in improving students' writing skills (Haerazi, 2023; Jiang et al., 2021).

Flipbook teaching materials represent an innovative alternative for educators seeking to enhance learning outcomes (Dewi & Wibawa, 2024; Angelini, 2016). Their interactive and visually appealing format engages students and supports diverse learning styles. Furthermore, their digital nature allows for flexibility in content delivery, enabling access across various devices and settings. The incorporation of local wisdom ensures that the material remains culturally relevant, promoting identity and pride among students while addressing the learning objectives effectively. The development of flipbook teaching materials based on local wisdom provides a viable and effective strategy for addressing challenges in traditional teaching resources. The significant improvement in students' learning outcomes, as evidenced by the pretest and posttest analysis, highlights the potential of these materials to transform educational practices. By leveraging technology and cultural relevance, flipbooks offer a pathway to more engaging, meaningful, and effective learning experiences, ultimately contributing to the holistic development of students.

CONCLUSION

The findings of this study highlight the significance of developing innovative teaching materials, such as flipbooks based on local wisdom, to address the limitations of traditional resources and enhance the learning experience. By incorporating local wisdom into digital teaching materials, educators can create contextually relevant content that connects students to their cultural and environmental heritage. This approach not only improves cognitive outcomes but also fosters motivation and engagement by providing meaningful learning experiences that resonate with students' everyday lives. The development process, grounded in the Borg & Gall research and development procedure, effectively addressed the identified challenges, resulting in teaching materials that align with learning objectives and outcomes. Expert validation confirmed the feasibility and appropriateness of these materials, ensuring their quality and utility in educational settings.

The use of flipbooks as digital teaching tools demonstrated a significant positive impact on students' ability to analyze facts and opinions in descriptive texts. The improvement in learning outcomes, as evidenced by the increase in posttest scores and supported by statistical analyses, underscores the effectiveness of these materials. By leveraging technology and integrating cultural relevance, flipbooks provide an engaging, flexible, and pedagogically sound solution for modern education. This study reaffirms the potential of innovative digital resources to enhance learning, offering educators a practical and effective strategy to meet diverse student needs while preserving and promoting local wisdom. The results contribute valuable insights into educational practices, paving the way for broader implementation and further research into culturally integrated digital teaching materials.

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