# FLITARA: Culture-Based Interactive Flipbook Innovation to Improve Elementary Schools' Literacy in the Era of Society 5.0

**Deanova Wahyu Eksa Putri[1], Nurita Fauzatin Syabiya[1], Zumrotus Sa'diyah[1], Aang Kunaifi[1], Zulfin Rachma Mufidah[1*], Nurul Istiq'faroh[1]**
[1]Universitas Negeri Surabaya
*Corresponding Author's email: _zulfinmufidah@unesa.ac.id_

**Abstract**
_Literacy is a very important foundation in education, especially at the primary school level because these skills support students' cognitive, social and emotional development. This study aimed to present a flipbook-based learning solution as an interactive digital media in improving reading literacy skills through Nusantara culture materials. The research method used is Research and Development (R&D) with the ADDIE development model which includes the stages of analysis, design, development, implementation, and evaluation. Data were collected through observation, interviews, pretest and posttest tests, and validation from experts. The results of this study show that FLITARA media obtained a very high validity category, and empirically proven to be able to significantly improve reading literacy and student learning participation in grade III elementary school students. In addition, this media also contributes to the internalization of cultural values and contextual character building of students. The results of this study strengthen the argument that integrating digital technology based on local culture is not only pedagogically relevant, but also strategic in shaping national identity and supporting the achievement of sustainable education goals._

## INTRODUCTION

### Background of the Study

In the world of education, technological advances have brought changes by producing various learning innovations that aim to improve the efficiency and effectiveness of learning (Qureshi et al., 2021; Lin et al., 2023). In the era of society 5.0, smart technology integrates human life, a demand in the education system to adapt to digital advances to create interactive, effective, and efficient learning (Legi et al., 2023; Octaviana et al., 2025). One of the main problems in this era is the low level of literacy of students from an early age, especially in reading and text comprehension skills (Nanda & Azmy, 2020; Hidayat et al., 2025). The reading literacy level of Indonesian students is still low compared to other countries, based on survey data from the Program for International Student Assessment (PISA) 2022 ranked 71 out of 81 literacy (OECD, 2023).

Literacy is a very important foundation in education, especially at the primary school level, because these skills support students' cognitive, social and emotional development and prepare students for future success (Abidin et al., 2025; Dzakiyah et al., 2023). This understanding is not only about academic achievement, but also about character development and critical thinking skills that

will prepare to face future challenges. Literacy is the essence of efforts to create a smart, cultured, and highly competitive society (Malik & Maemunah, 2020). Good literacy skills, instilled with the cultural character of the archipelago, are expected to not only produce academically intelligent students but also form individuals with character and culture.

The importance of learning about Indonesia's cultural diversity in elementary schools is to introduce and preserve cultural values so that they are not lost. One way to achieve this goal is to study cultural diversity in elementary schools (Saputra et al., 2025; Tirtawati et al., 2025). In addition, local wisdom as a source of learning is also important. This is not only useful in the context of formal education but also in shaping students' character to become meaningful members of their local community (Irpan et al., 2024; Fatmawati & Wulandari, 2024). In supporting this process, educational media serve as a means to convey messages or lesson materials, while stimulating students' attention, interest, thinking, and emotions to achieve learning objectives. The use of technology in the teaching and learning process is now commonplace, ranging from simple to sophisticated technology (Resti et al., 2024). One of the uses of technology in learning media is the use of Flipbook, which can be an alternative teaching media for elementary school teachers in creating innovative teaching media that is interesting for their students (Putra et al., 2023; Wahab et al., 2025).

## Problem of the Study

Previous research has shown that reading literacy problems were found in a study at public elementary school 8 Menteng, which revealed various limitations, including low comprehension of reading content (94.11%), lack of attention to punctuation (100%), difficulties in reading fluency (64.70%), and errors such as omitting letters or words and reversing letters like b and p (each at 64.70%)(Suniati, 2016). Similar issues were also observed at public elementary school Plerean 2 in Jember, particularly in sixth grade, where students still face difficulties in understanding reading material (Agustin et al., 2024). This situation not only affects their academic performance but also hinders progress in critical thinking and creativity skills.

The results of a systematic literature analysis on the reading abilities of elementary school students show that the main challenges lie in the lack of support from parents, low interest in books, and weak teaching methods, which continuously hinder students' reading fluency (Maulidya, 2024; Ristanti et al., 2025). On the other hand, a study conducted at public elementary school of  Sitibentar (fourth grade, 2023/2024 academic year) revealed that only about 9.1% of students have advanced reading skills, while the majority (more than 80%) are still at the basic and intermediate levels indicating that most students have not yet reached the minimum level of reading literacy (Talentiano et al., 2025; Dewi & Wibawa, 2024).

Based on findings in various situations, it has been revealed that the problem of low reading ability at the elementary school level is a systemic issue, not just an individual weakness of each student. If this issue is not addressed promptly, the long-term consequences could include a decline in human resource quality and weakened competitiveness among the younger generation in the global era. Therefore, innovative and creative solutions are needed, such as the development of engaging, interactive, and relevant learning materials to ensure that reading skills are not solely focused on technical aspects but also enhance deep understanding, critical thinking abilities, and foster a culture of literacy from an early age.

## Research's State of the Art

In a study conducted by Rohman, (2022) reading is considered an important foundation for developing critical, analytical, and creative thinking skills in students. However, the study indicated that reading literacy levels in Indonesia remain low. Therefore, it is important to establish a culture of literacy from an early age. The theoretical foundation of this approach stems from constructivism, which views reading as an active process of creating meaning through interaction with text (Putri & Fatimah, 2025; Suryana et al., 2022). The Indonesian government has also implemented several literacy policies, such as the Quality Reading Books Program, which has distributed over 15 million books to more than 20,000 early childhood education (PAUD) and elementary schools Perpustakaan Nasional Republik Indonesia (The National Library of the Republic of Indonesia), (2024), as well as a collaboration with the Tanoto Foundation, which supplied 76,752 books to 12 regions. According to Perpustakaan Nasional Republik Indonesia (The National Library of the Republic of Indonesia) (2024),

the Community Literacy Development Index (IPLM) increased from 64.48 in 2022 to a target of 71.4 for 2024. However, challenges remain, particularly regarding the provision of engaging reading materials and improving teachers' ability to implement literacy strategies.

One alternative that is beginning to emerge is the use of interactive flipbooks as a tool for digital literacy. Flipbooks are considered efficient because they combine text, images, sound, and quizzes in one platform that is attractive to students. Local research indicates that flipbooks can enhance reading comprehension, learning interest, and student participation at the elementary level (Fatonah & Muzaki, 2024; Listyana et al., 2024). Incorporating folklore into flipbooks is also known to increase reading interest and introduce important local cultural values to students' lives (Manalu et al., 2025). Globally, research conducted by Pramesti and Wahyudi, (2025) shows that e-flipbooks with interactive features can promote digital literacy skills and learning enthusiasm, while research on "Choose Your Own Adventure e-books" demonstrates a significant increase in vocabulary and reading comprehension among elementary school students (Nafiah et al., 2023). Furthermore, the use of generative technology in modern flipbooks, such as GenAIReading, has been proven to improve text comprehension by up to 7.5% by combining automatic summarization and visualization based on dual coding theory (Dahliana et al., 2024; Morita et al., 2025).

Thus, this study occupies an important position in filling the gaps in previous studies. Most flipbook studies still emphasize aspects of feasibility or general improvements in learning motivation, whereas this study specifically develops a folklore-based reading literacy flipbook with interactive features designed to address real challenges faced by elementary school students, such as ignoring punctuation marks, lack of fluency, and mistakes in pronouncing similar letters (e.g., b and p). Additionally, this study integrates local cultural values and Pancasila principles while aligning them with national policies (Quality Reading Materials, strengthening village libraries) and SDG 4 targets on quality education. This novelty makes this study not only a pedagogical innovation but also a contextual step in building an adaptive literacy culture in the Society 5.0 era.

## Gap Study and Objective

Various studies show that literacy skills, especially in reading, are an important foundation for the development of critical thinking skills and academic success in elementary school (Putri et al., 2024). However, reading literacy achievement among Indonesian students is still relatively low. PISA 2022 data indicates that Indonesia ranks 71st out of 81 countries in reading literacy (OECD, 2023). Findings from field research also reinforce this statement. Sapari and Elhawwa, (2023), found that elementary school students in Palangka Raya experienced difficulties in understanding punctuation, reading fluency, and frequently made mistakes in recognizing letters, while Talentiano et al. (2025) reported similar problems in Jember, particularly in terms of text comprehension. In line with this, research by Talentiano et al. (2025) shows that more than 80% of fourth-grade students at Sitibentar Elementary School are still at the basic and intermediate levels in reading skills, indicating that this literacy problem is systemic, not just an individual weakness.

In an effort to resolve this issue, innovation in education has begun to focus on the use of digital media. Interactive flipbooks, as one type of teaching media, have proven effective in increasing student motivation, interest, and learning outcomes. Research conducted by Fatonah & Muzaki, (2024) indicates that the use of interactive flipbooks can improve reading comprehension and student participation in literacy activities, while Putra and colleagues in 2023 have demonstrated that flipbook-based instructional materials are effective in enhancing the quality of classroom instruction. International research also supports these findings. Purnomo et al. (2024) found that e-flipbooks with interactive features can promote digital literacy and learning enthusiasm, while Morita et al. (2025) showed that the use of interactive digital books based on generative AI technology can improve text comprehension by up to 7.5%. Additionally, integrating cultural values into flipbooks offers additional pedagogical benefits. Musaddad et al (2025) stated that incorporating Nusantara folk tales into flipbooks can expand students' vocabulary and cultural understanding. This is reinforced by research conducted by Lake et al., (2023) and Pangestu et al., (2024) which confirms that media based on the culture of the Indonesian archipelago not only fosters an interest in reading but also preserves local cultural identity.

However, most previous studies have focused more on the feasibility or improvement of learning motivation without specifically targeting basic literacy issues, such as punctuation errors, reading fluency problems, and confusion in distinguishing similar letters (e.g., b and p), which are still commonly found in elementary school classrooms in Indonesia. Additionally, the development of flipbooks based on Nusantara culture has primarily been applied to Science and Social Studies (IPAS) subjects Prameswari et al. (2023) and Sumarni et al. (2024), while their use in Indonesian language learning, particularly in storytelling and folk tales, remains under-explored. This indicates a research gap regarding the integration of cultural values with language learning to enhance students' reading literacy.

## METHOD

### Type and Design

This research uses the R&D (Research and Development) method. This media development design uses the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The ADDIE model is used because it is systematic and flexible, which allows later evaluation at each stage to ensure the final results are in accordance with the learning objectives (Hidayat & Nizar, 2021).
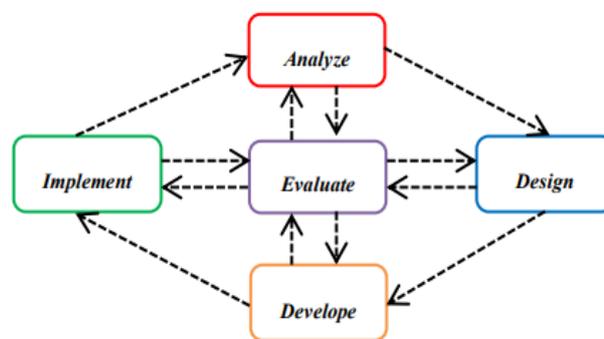


**Figure 1**. Stages of the ADDIE Development Model
Source Widari & Putra, 2022)

The research stages include analysis to identify learning needs, student characteristics, and objectives; designing learning solutions in the form of materials, strategies, and interactive media integrated with Nusantara culture; developing the product through content creation, feature integration, and initial feasibility testing validated by experts; implementing the FLITARA media trial with grade 3 students at Roudlotul Ulum Elementary School to measure effectiveness through observations, questionnaires, and reading literacy pre- and post-tests; and evaluation to identify strengths, weaknesses, and improvements based on trial results and feedback, leading to the refinement of the media to better meet students' needs.

### Data and Data Sources

This study gathered both qualitative and quantitative data in order achieve its aims and solve the research issues. The main subjects of FLITARA media implementation were third-grade children at Roudlotul Ulum Elementary School, who provided primary data such as pretest and posttest reading literacy outcomes, classroom observations, and students' reactions to the use of culture-based interactive flip books. Teachers also acted as major data sources, providing insights through interviews on student characteristics, literacy issues, previously used media, and expectations for effective learning tools, all of which contributed to the media design being contextual and relevant. Secondary data were gathered from printed and digital documents such as curricula, syllabi, lesson plans, folklore textbooks, journals, government policy articles on quality reading programs, and previous studies, all of which strengthened the theoretical and conceptual foundation of FLITARA media development in line with educational policy and the literacy demands of the Society 5.0 era.

### Data Collection Technique

The data collection techniques in this study included observation, interviews, document study, tests, and product validation. Direct classroom observations were conducted to record the learning process, teacher–student interactions, student participation, reading interest, and difficulties in understanding folklore texts. Observation was also used to assess the practicality of the media, involving other teachers who were asked to evaluate the ease of use, clarity, and usefulness of the FLITARA media in supporting learning. Semi-structured interviews with the grade III homeroom teacher were conducted to gather additional information regarding student characteristics, literacy learning strategies, factors influencing reading interest, and expectations for innovative learning media.

Furthermore, the document study involved analyzing the curriculum, lesson plans, student scores, and textbooks used in the school to align the flipbook content with primary education standards. Tests in the form of pretests and posttests were administered to measure improvements in reading literacy before and after using the media. To measure validity, product validation sheets were used, completed by material and media experts using a Likert scale of 1–4, assessing content feasibility, visual design, interactivity, and integration of Nusantara cultural values. The results of validation and practicality assessments, along with data from observations, interviews, and tests, were triangulated to ensure the reliability and appropriateness of the media for learning needs.

### Data Analysis

Expert validation of the FLITARA media was conducted by involving material experts, media experts, and linguists, who assessed content appropriateness, visual design, interactivity, language clarity, and terminology usage. Data were then analyzed through a mixed-method approach: qualitative data from observations and interviews were examined using thematic analysis to identify patterns such as students' reading interest, responses to culture-based media, challenges in understanding folktales, and the media's effectiveness in facilitating learning, while the findings were aligned with contextual learning theory and a constructivist approach as the foundation of the media development (Layyina et al., 2023).

On the other hand, quantitative data obtained from the pretest and posttest results were analyzed using descriptive statistics, such as the average value, the percentage of score improvement, and the difference in scores between the experimental and control groups. The research design used was a quasi-experimental design with a non-equivalent control group design, which allows researchers to compare the effectiveness of FLITARA media with conventional learning. This analysis provides an objective picture of the extent to which culture-based interactive flipbook media can significantly improve students' literacy skills.

Validation was carried out by giving scores in the 1-4 value range, and writing improvement notes directly according to the needs on the validation sheet. The calculation of instrument validation is used as follows (See Table 1):

**Table 1.** Assessment Criteria

| Assessment criteria | |
|---|---|
| 81-100 | Very high validity |
| 61 – 80 | High validity |
| 41 – 60 | Moderate validity |
| 21 – 40 | Low validity |
| 0 – 20 | Very low validity |

The obtained average score is then used to determine whether the product is feasible to use, feasible with revision, or not feasible. Expert feedback is also considered to refine the product beyond numerical classification, ensuring that the FLITARA media meets both technical and pedagogical standards. This validation aims to ensure that the media developed is not only visually appealing, but also feasible to use in a formal learning context.

## RESULTS

### Analyze

The results of the analysis show that third-grade students at Roudlotul Ulum Elementary School have problems understanding Indonesian language material, especially fairy tales. This can be seen from their low interest in learning and low average scores in class. This condition is influenced by the limited learning media used, which are not suited to the learning style characteristics of students who are more interested in visual media with audio. Based on observations, interviews with teachers, and curriculum evaluations that have been conducted, it is evident that an innovative medium is needed that can present material in an interactive, contextual, and student-centered manner. Therefore, the FLITARA media was developed, highlighting Nusantara culture as a new innovation. This media has proven effective in enhancing students' reading skills and learning engagement, and also plays a crucial role in the internalization of cultural values and the cultivation of nationalistic feelings among students from an early age.

### Design

At this planning stage is the stage of making material designs, designs and several instruments used in the development stage. At the material planning stage, the material is adjusted to the results of the analysis above by determining the learning flow in the presentation of the material. The design is carried out after the material planning is completed, then it will continue to make instruments that will be used in validation in terms of material and media for assesing the feasibility of the Flipbook media developed.
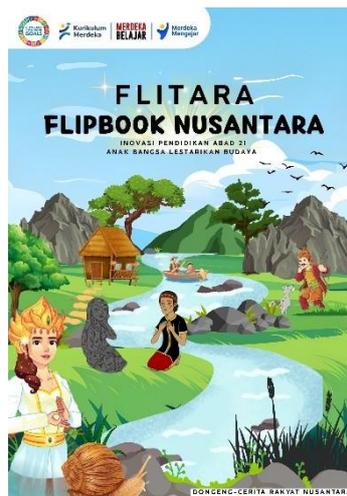


**Figure 1.** Front Cover

The cover of FLITARA features a visual illustration that depicts the cultural richness of Indonesia through the folk tales of the archipelago (See Figure 1). The image shows legendary figures such as Malin Kundang kneeling, as well as characters from the Lutung Kasarung tale. The presence of these figures symbolizes the content of FLITARA, which focuses on Indonesian folk tales as a means of learning the Indonesian language. Additionally, elements such as the use of a backdrop featuring rice fields, mountains, rivers, boats with fishermen, and traditional houses depict the diversity of nature and culture in the Nusantara region. These visual elements were chosen to provide a contextual atmosphere, making it easier for students to understand the stories while also familiarizing themselves with the nation's culture.

The symbols on the cover are not merely decorative but also carry educational significance. The depicted characters were chosen because they are rich in moral messages that can be instilled in students from an early age. The flowing river in the center of the image symbolizes the continuous development of knowledge, while the rice fields, traditional houses, and trees illustrate the local

wisdom embedded in the lives of Nusantara communities. The logos for the Merdeka Curriculum, Merdeka Belajar, Merdeka Mengajar, and SDGs at the top emphasize that this media was developed in line with national education policies and sustainable development goals. The main cover of FLITARA is not only visually appealing but also represents the primary purpose of developing this media, which is to improve reading literacy and internalize cultural values and nationalism among elementary school students.



**Figure 2.** Instructions for Use

Based on Figure 2, the user can read the guide provides guidance for teachers on how to optimize the use of FLITARA as an interactive learning medium. Teachers are encouraged to introduce interactive flipbooks as an engaging modern learning tool and utilize the barcode feature to access audio-based quizzes and exercises. Additionally, teachers are encouraged to discuss the story's content with students, explore moral messages and cultural values embedded within it, and provide opportunities for students to retell the story in their own words. This approach aims to enhance skills while connecting the story's content to students' daily lives, making learning more meaningful and contextual.

For students, these usage guidelines emphasize the importance of literacy. They can also use the barcode feature to practice questions and answer them carefully to sharpen their understanding. Students are also encouraged to discuss the story's content with teachers or classmates, retell it in their own words, and extract moral values from each section they have studied. FLITARA is not only a reading medium but also a tool for character development, critical thinking skills, and communication abilities that will support the growth of literacy and a love for Nusantara culture itself.

Figure 3 present the tale of Lutung Kasarung, which tells the story of Purbasari, the kind-hearted princess of the Kingdom of Pasir Bang, who was falsely accused by her sister Purbararang, leading to her expulsion from the palace. In the midst of her suffering, Purbasari meets a Lutung, who turns out to be the incarnation of a powerful prince from Kahyangan, named Lutung Kasarung. Thanks to Lutung Kasarung's help, Purbasari's illness is finally cured, and she regains her happiness. This fairy tale was chosen because it is full of moral values, especially the message that kindness, patience, and honesty will ultimately defeat evil.

**Figure 3.** Let's Get Literate Lutung Kasarung

In addition to the story, this page also includes a section called "Let's Read!" which encourages students to gain a deeper understanding of what fairy tales are, their characteristics, and the moral messages they contain. With concise presentation and easy-to-understand language, students are guided to not only read the story but also analyze the positive values that can be taken from it. The "Let's Quiz!" feature also adds to the interactivity of learning, where students can test their understanding after the previous reading activity. This is in line with FLITARA's own goal, which is to build skills and internalize the culture of the archipelago through fun and meaningful reading activities.



**Figure 4.** Let's Get Literate Malin Kundang

Figure 4 presents the legendary story of Malin Kundang from Sumatra, which tells of a child who left home in search of a better life but ended up disobeying his own mother. The story begins with Malin's childhood with his mother after his father died while traveling. From a young age, Malin was known to be intelligent, though somewhat mischievous. As an adult, he decided to travel to a foreign land. Throughout his journey, Malin faced various obstacles, including pirate attacks, but managed to survive. Eventually, he settled in a village. Through his perseverance and hard work, Malin achieved success, becoming wealthy and marrying a girl from a prominent family.

The main conflict arises when Malin, now successful, returns to his hometown on a large, luxurious ship. When his mother recognized him from the scar on his arm, Malin denied it, even insulting and pushing his mother away, as he was ashamed to acknowledge his origins. His mother's heart was broken, and she prayed to God for Malin to be taught a lesson. Eventually, her prayer was answered, and Malin turned into a rock on the beach. The end of this story is filled with moral lessons, emphasizing the importance of being dutiful and loving toward one's parents, no matter their circumstances. Through this folktale, FLITARA underscores that true success is not measured solely by wealth and status, but also by devotion to one's parents—a noble cultural value of the Nusantara region that must be instilled from a young age.



**Figure 5.** Let's Practice

Figure 5 presents an opportunity to practice. This page contains the "Let's Practice!" section, which includes practice questions to test students' understanding after reading the material presented earlier. The questions are multiple choice with ten questions covering basic concepts about fairy tales, such as the definition of fairy tales, characters, objectives, types of fairy tales (fables, legends, jokes), and the moral messages contained in fairy tales. The questions are also designed to help students recall the content of the stories they have learned, such as Malin Kundang and other fairy tales. This section is designed to train students' memory, understanding, and analytical skills in distinguishing between types of fairy tales and the values and messages they contain.

In addition to multiple-choice questions, there are also short-answer exercises that encourage students to think more critically by completing statements about the types of folktales, characters in fables, and moral messages that are useful for life. These exercises not only measure memory skills but also emphasize conceptual understanding and its relevance to daily life. By combining multiple-choice questions with these exercises, students are encouraged to be more interactive in the learning process. The "Let's Practice!" page is a form of functional literacy application, where students not only read and listen to stories but also process information to enhance their understanding of Nusantara culture.

**Figure 6.** Let's Collaborate

Figure 6 presents an opportunity to collaborate. This page contains the "Let's Collaborate!" activity, which is a group project in the form of Nusantara Fairy Tale Theater. The purpose of this activity is to improve students' skills in reading, understanding, and verbally conveying stories, while also introducing Nusantara culture through regional fairy tales. Students are encouraged to practice speaking in public, working together in groups, and developing creativity through storytelling performances. The materials used as a basis include the definition of folktales, examples of Nusantara folktales such as Timun Mas, Malin Kundang, or Si Kancil. Additionally, it covers the elements of folktales, including characters, setting, plot, and moral lessons. This activity is allocated for 2 class periods (2 x 35 minutes), during which students read and perform the folktale in the form of a simple drama in groups.

The implementation guidelines are outlined step-by-step, starting with reading the folktale, forming small groups, and then determining each member's role. Students practice dialogues with simple expressions and movements, using props they can make themselves, until they confidently perform their drama. As reinforcement, there are reflection questions that encourage students to reflect on their experiences, such as mentioning the title of the fairy tale performed, the origin of the story, the characters portrayed, the moral message contained, and their experience in acting out the drama. This page not only develops reading literacy but also communication skills, participation, and appreciation for Nusantara culture. This collaborative activity aligns with FLITARA's goal of making literacy learning more contextual, creative, and meaningful for students.
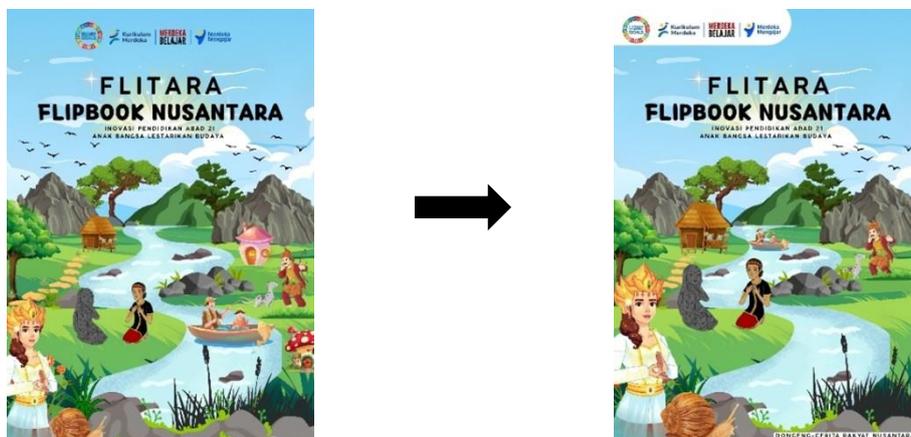
**Development**



**Figure 7.** Cover revision based on validator feedback

Cover revision based on validator feedback that the cover design should be simplified and focused on the content of the media (Figure 7). In the initial version, the cover was too cluttered with many irrelevant elements, making the main message unclear. Additionally, the text "Dongeng Cerita Rakyat Nusantara" was missing, which should have clarified the identity of the media. After revision, the cover was simplified to highlight the main story as the core representation of the media. The phrase "Dongeng Cerita Rakyat Nusantara" was also added so that students could immediately understand the core of the media. The background of mountains, rice fields, rivers, a traditional house, and a boat were retained but positioned more proportionally. Meanwhile, the logos for the Merdeka Curriculum, Merdeka Learning, Merdeka Teaching, and SDGs need to be arranged more neatly.



**Figure 8.** Instructions for Use Revision Based on Validator Feedback

The validator provided feedback that the instructions for use should not only be aimed at students, but should also include guidelines for teachers (See Figure 8). In the initial version, the instructions were solely focused on students. However, after revisions, the guidelines were expanded to include additional instructions for teachers on how to optimize the use of the FLITARA media in teaching. Teachers are guided to maximize the use of this FLITARA media. Thus, this page not only assists students but also facilitates teachers in effectively and meaningfully integrating FLITARA into the learning process.
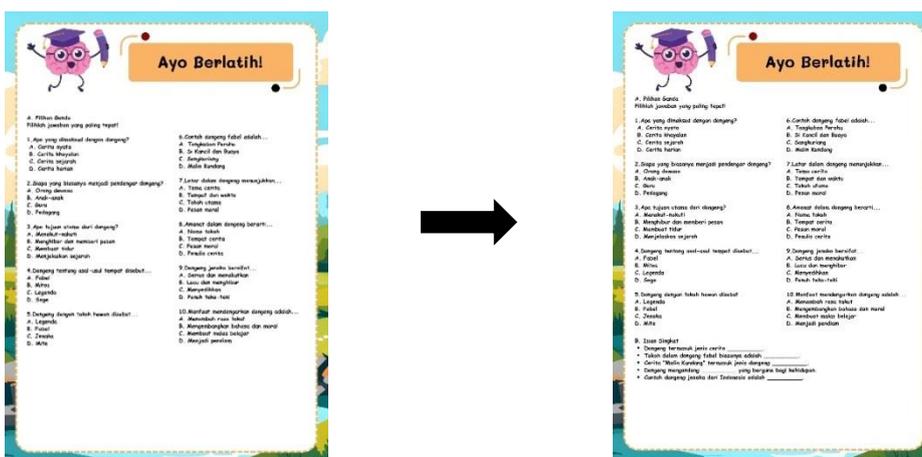


**Figure 9.** Let's Practice Revision based on validator feedback

Based on Figure 9, the validator provided feedback that the exercises should not only consist of multiple-choice questions, but also include other types of questions that encourage students to think critically. In the initial version, the exercises only contained multiple-choice questions, which tended to encourage students to memorize answers without fully understanding the material. After revision,

this page now includes a combination of multiple-choice and short-answer questions. The short-answer questions are designed to assess deeper understanding. This change makes the practice activities more interactive, as they not only train memory but also develop critical thinking skills and the ability to connect the material to real-life situations.



**Figure 10.** Let's Collaborate

Based on Figure 10, the validator provided feedback that collaborative activities should not only consist of performances, but should also include reflective activities as a means of measuring the extent of students' understanding. In the initial version, this page only contained general instructions without any reflective activities. After revision, reflective questions were added to guide students in deepening their understanding. This change makes the activity more meaningful, as it not only fosters participation but also encourages students to strengthen their understanding and connect their role-playing experiences with cultural values within the Nusantara cultural context.

*Data analysis of learning media validation*

Validation conducted by media experts on FLITARA Flipbook Nusantara media consists of 2 aspects, namely aspects of media display feasibility and interactivity feasibility aspects The results of media expert validation can be seen in Table 2.

**Table 2.** Validation of Media

| Aspect | Score | Final Score |
|---|---|---|
| Media Display Eligibility | 10 | |
| Interactivity Eligibility | 11 | |
| Total Score | 22 | 91 |
| Maximum Score | 24 | |

The validation of the media instrument above obtained a final result of 91. So it can be concluded that the instrument to measure flipbook media has a very high validity category and is suitable for use.

*Data analysis of material validation*

Validation conducted by material experts on FLITARA Flipbook Nusantara media consists of 2 aspects, namely aspects of content feasibility and feasibility of use. The results of the material expert validation can be seen in Table 3. The validation of the material instrument above obtained a final result of 95. It can be concluded that the material expert questionnaire instrument has very high validity and is suitable for use.

**Table 3.** Validation of Material

| Aspect | Score | Final Score |
|---|---|---|
| Content Eligibility | 11 | |
| Feasibility of Use | 8 | 95 |
| Total Score | 19 | |
| Maximum Score | 20 | |

*Language validation data analysis*

Validation conducted by linguists on FLITARA Flipbook Nusantara media consists of 2 aspects, namely language clarity and aspects of the use of terms. The results of the material expert validation can be seen in Table 4.

**Table 4.** Validation of Language

| Aspect | Score | Final Score |
|---|---|---|
| Clarity of Language | 4 | |
| Use of Term | 3 | 87,5 |
| Total Score | 7 | |
| Maximum Score | 8 | |

The validation of the language instrument above obtained a final result of 87.5. So it can be concluded that the instrument to measure language in flipbooks has a very high validity category and is suitable for use. After the instrument was declared valid, a reliability test was conducted as follows.

**Table 5.** Result the SPSS

| Reliability Statistics | | | |
|---|---|---|---|
| Cronbach's Alpha | Part 1 | Value | .562 |
| | | N of Items | 6[a] |
| | Part 2 | Value | .467 |
| | | N of Items | 5[b] |
| | Total N of Items | | 11 |
| Correlation Between Forms | | | .748 |
| Spearman-Brown | Equal Length | | .856 |
| Coefficient | Unequal Length | | .856 |
| Guttman Split-Half Coefficient | | | .774 |

Based on Table 5 above, the test results show a value of $\alpha \geq 0.7$. It can therefore be concluded that the test instrument is reliable. Based on the results of the validity test from the three experts, it is considered valid and feasible in the learning process.

## Implementation

The implementation stage is carried out after the media has been made, then implemented to grade IV students. The trial design used a quasi-experimental Pretest-Posttest Group Design with nonequivalent control group design. The experimental and control groups were randomly selected and then given a pretest and posttest simultaneously. Before learning activities, both classes were given a pretest to measure students' initial ability to understand Nusantara fairy tales material. The experimental class then learned using the Interactive Flipbook media "FLITARA", while the control class followed learning with conventional methods. After the learning process was complete, both classes were given a posttest to measure the improvement in learning outcomes.

*Control Class*

**Table 6.** The Result of Posttest and Pretest Control Class

| Student | Pre-test | Post-test | Gain |
|---------|----------|-----------|------|
| A1 | 56 | 68 | 12 |
| A2 | 48 | 64 | 16 |
| A3 | 52 | 70 | 18 |
| A4 | 50 | 66 | 16 |
| A5 | 60 | 72 | 12 |
| ... | ... | ... | ... |
| Mean | 53.7 | 68.7 | 15.0 |

Based on Table 6, it can be seen that there is an increase in the average learning outcomes of students in the Control Class after receiving conventional learning. The average pre-test score was 53.7, while the post-test score increased to 68.7, with an average gain of 15 points. This indicates that the students experienced improvement after conventional instruction, although the increase was moderate. The improvement in this class was mainly due to reinforcement and practice from the teacher, not from the application of interactive media such as FLITARA.

*Normality Test (Control Class)*

The normality test was carried out using the **Shapiro–Wilk Test** to determine whether the pretest and posttest data in the control class were normally distributed.

**Table 7.** Normality Test (Control class)

| Test | Sig. | Interpretation |
|------|------|----------------|
| Pre-test | 0.086 | Normal |
| Post-test | 0.112 | Normal |

Based on the Table 7, it can be seen that the significance value of the pretest is **0.086 > 0.05** and the posttest is **0.112 > 0.05**, which means that both data sets are **normally distributed**. Therefore, the control class data meet the assumption of normality, and further analysis can be conducted using a **parametric test** (Paired Sample t-Test).

*Homogeneity Test (Control Class)*

The homogeneity test was conducted using **Levene's Test for Equality of Variances** to check whether the data variances between pretest and posttest were equal.

**Table 8.** Homogeneity Test (Control Class)

| Test | Sig. | Interpretation |
|------|------|----------------|
| Levene's Test | 0.940 | Homogeneous |

Based on the Table 8, the value of Sig. Levene's Test for Equality of Variances is 0.940 > 0.05, which means that the variance between the pretest and posttest data is homogeneous or equal. Therefore, the data satisfy the homogeneity assumption, and the Paired Sample t-Test can be performed.

*Eksperiment Class*

**Table 9.** The Result of Pretest and Posttest (Experiment Class)

| Student | Pre-test | Post-test | Gain |
|---|---|---|---|
| B1 | 54 | 84 | 30 |
| B2 | 50 | 82 | 32 |
| B3 | 56 | 86 | 30 |
| B4 | 52 | 88 | 36 |
| B5 | 58 | 90 | 32 |
| ... | ... | ... | ... |
| Mean | | 86.0 | 31.8 |

From Table 9, it can be seen that there is a considerable increase in the average learning outcomes of students in the Experiment Class. The average pre-test score was 54.2, while the post-test score increased to 86.0, with an average gain of 31.8 points. This significant improvement was achieved after the implementation of FLITARA media. The use of this media provided students with an engaging learning experience that combined literacy and local culture, resulting in higher motivation and comprehension.

**Table 10.** Normality Test (Experiment Class)

| Test | Sig. | Interpretation |
|---|---|---|
| Pre-test | 0.028 | Not Normal |
| Post-test | 0.073 | Normal |

Based on the Table 10, the Sig. value for the pretest (0.028) < 0.05, which means the pretest data are not normally distributed, while the post-test data are normal (0.073 > 0.05). Therefore, the pretest comparison between control and experimental classes will use the Mann–Whitney U Test (non-parametric), while the post-test comparison will use the Independent Samples t-Test.

*Homogeneity Test (Experiment Class)*

**Table 11.** Homogeneity Test (Experiment Class)

| Test | Sig. | Interpretation |
|---|---|---|
| Levene's Test | 0.157 | Homogeneous |

Based on the Table 11, the Sig. value of Levene's Test is 0.157 > 0.05, which means that the variance between the pretest and posttest scores in the experiment class is homogeneous or equal. Therefore, further hypothesis testing can proceed using the parametric t-Test for posttest results.

*Comparative Analysis Between Control and Experimental Classes*

*Pre-test Comparison (Mann–Whitney U Test)*

**Table 12.** Pre-test Comparison (Mann–Whitney U Test)

| Class | N | Mean | Sum of Ranks |
|---|---|---|---|
| Experiment | 24 | 25.37 | 608.5 |
| Control | 24 | 23.63 | 567.5 |
| Test Statistics | Mann–Whitney U | | |
| Sig. (2-tailed) | 0.412 | | |

Based on the Table 12, the Asymp. Sig. (2-tailed) value is 0.412 > 0.05, which means $H_0$ is accepted and $H_a$ is rejected. Thus, there is no significant difference between the average pretest scores

of the control and experiment classes, indicating that both groups had equal initial ability before the learning intervention.

*Post-test Comparison (Independent Samples t-Test)*

**Table 13.** Post-test Comparison (Independent Samples t-Test)

| Class | N | Mean |
|---|---|---|
| Control | 24 | 68.7 |
| Experiment | 24 | 86.0 |
| Test Statistics | Independent Samples t-Test | |
| Sig. (2-tailed) | 0.001 | |

Based on the Table 13, the Sig. Levene's Test for Equality of Variances is 0.157 > 0.05, meaning the variance between both groups is homogeneous. Therefore, the interpretation of the Independent Samples Test is based on the "Equal variances assumed" row. The Sig. (2-tailed) value is 0.001 < 0.05, so $H_o$ is rejected and $H_a$ is accepted. This means there is a significant difference between the posttest averages of the two classes. The Mean Difference value is -17.33333, with a 95% Confidence Interval of -23.04122 to -11.62544, showing that the difference is statistically significant. The calculated t-value is 5.120, while the t-table value $(\alpha/2; df) = (0.025; 46)$ is 1.678. Because t-count (5.120) > t-table (1.678), it can be concluded that $H_o$ is rejected and $H_a$ is accepted. Therefore, there is a significant difference between the control and experimental classes' posttest results, confirming that the FLITARA (Flipbook Literasi Nusantara) media was effective in improving students' reading comprehension compared to conventional learning.

**Table 14.** Conclusion

| Types of Analysis | Type of Class | Type of Test | Analysis Data |
|---|---|---|---|
| Normality Test | Control Class | Pretest | Normal |
| | | Post-test | Normal |
| | Experimental Class | Pretest | Not normal |
| | | Post-test | Normal |
| Homogeneity Test | Control Class | - | Homogeneous |
| | Experimental Class | - | Homogeneous |
| Mann–Whitney U Test | Pre-test (Control vs. Experimental) | - | No significant difference (equal initial ability) |
| Independent Samples t-Test | Post-test (Control vs. Experimental) | - | Significant difference (FLITARA media is effective) |

In independent samples test, both the initial analysis and the reanalysis showed that there was a significant difference between the control class and the experimental class. This was reinforced by the results of calculating the t-value with the t-table value, where the t-value was greater than the t-table value, so it can be concluded that there was a significant difference between the learning outcomes in the control class and the experimental class. Thus, the effectiveness of using FLITARA as a learning medium has been proven to have a significant impact on student learning outcomes compared to learning in the control class (Table 14).

**Evaluation**

At the evaluation stage, researchers conducted a comprehensive assessment of the effectiveness of FLITARA Learning Media (Nusantara Interactive Flipbook) in improving student learning outcomes. The evaluation mainly includes three aspects, namely media suitability based on expert evaluation, learning effectiveness through comparison of pre- and post-test results, and user responses (students) to the use of flipbooks. The evaluation methods adopted are quantitative and qualitative methods, with formative evaluation phases during the development process and summative evaluation after implementation. In the formative assessment, validation tests were conducted by media, material, and language experts. Media experts assessed the display and interactivity aspects with a score of 91 (very effective category), material experts assessed the suitability of the content and conformity with the curriculum with a score of 95 (very effective), and linguists assessed the clarity of language and use of terminology with a score of 87.5 (very effective). Before the flipbook was widely implemented, the researcher conducted a trial on a group of 30 students in ensuring feasibility in terms of ease of use, readability, and visual appeal.

Despite its high effectiveness, the use of FLITARA still faces several limitations. First, dependence on electronic devices (tablets, smartphones, projectors) and the internet poses a challenge in schools with limited infrastructure. Second, some students who are not yet accustomed to using digital technology require more time to adapt, so the potential benefits of the media cannot be optimized in the early stages of implementation. Additionally, while the visual and audio aspects are already interactive, further feature enhancements are needed to accommodate various learning styles (e.g., gamification or adaptive learning).

Based on the evaluation results, the authors decided to prioritize the development of a hybrid version of FLITARA that combines both digital and printed formats. This decision is grounded in empirical findings from the field, which indicate that not all schools possess adequate technological infrastructure, particularly in terms of device availability and stable internet connectivity. The provision of a printed version that still preserves the integration of cultural values and the structured interactive features is expected to broaden the accessibility of FLITARA across diverse educational contexts. In this way, the hybrid model not only minimizes disparities in access to innovative learning media but also ensures that students in under-resourced schools can equally benefit from the literacy enrichment offered by FLITARA.

## DISCUSSIONS

The results showed that the use of interactive flipbook media based on Nusantara culture developed in the form of FLITARA was significantly able to improve students' reading literacy skills at the elementary school level, especially in folklore material. The increase in learning outcomes obtained by the experimental group compared to the control group indicates that a digital media-based approach combined with local wisdom can provide a more interesting, contextual and meaningful learning experience for students. This finding is in line with constructivist theory which states that students construct their knowledge through active interaction with the environment as well as socially and culturally relevant learning materials.

In this context, the presence of cultural elements in learning media plays a dual role. First, as content that enriches students' understanding of Indonesia's cultural heritage. Second, as a means to strengthen national identity through the internalization of noble values contained in folklore, which is presented digitally and interactively. This finding corroborates the results of research conducted by Lake et al. (2023), which states that integrating folklore into digital flipbook media can improve literacy while strengthening students' cultural literacy. In addition, Pangestu et al. (2024) showed that digital media derived from local cultural wealth can significantly grow students' interest in reading, especially at the elementary school level.

In addition to the content aspect, FLITARA's success is also supported by its interactive design, which incorporates features such as barcode scanning to access quizzes, story-based collaborative activities, and the use of audio-visual elements that support multimodal learning. This is in line with 21st-century learning principles that demand active and creative student engagement in the learning

process. The interactivity advantage of this media is also validated through the assessment of experts in the fields of media, material, and language, which shows a very high validity score. Therefore, it can be concluded that learning media design that considers interactive, visual, and contextual aspects is very effective in improving students' learning experience and outcomes in the digital era.

However, there are some technical challenges that need to be considered. The reliance on electronic devices, such as tablets or smartphones, as well as internet connections, is an obstacle in some elementary school environments, especially those in areas with limited infrastructure. Therefore, the sustainability of this media implementation needs to be supported by the provision of adequate facilities and training for teachers in integrating digital media into learning based on the independent curriculum or the prevailing national curriculum.

The implications of these research findings are quite broad, covering media development, strengthening cultural literacy, as well as strategies to improve the quality of basic education. FLITARA is not only a learning media innovation, but also a best practice model in combining educational technology with local values within the framework of sustainable education development (SDGs point 4: Quality Education). Thus, the development of local culture-based media is not only relevant from a pedagogical perspective, but also nationally strategic in strengthening the nation's character and cultural identity from an early age (Munawwaroh et al., 2025).

Future research directions can focus on developing similar media for higher grade levels, or for other relevant subjects, such as Pancasila and Citizenship Education (PPKn) or Social Sciences (IPS), which also contain cultural content. In addition, it is necessary to test the effectiveness in various schools with diverse geographical and socio-economic backgrounds, in order to test the generalizability of the findings obtained. Longitudinal research is also needed to evaluate the long-term impact of using FLITARA media on students' literacy skills and character development.

Overall, the results of this study show that the integration of local culture into interactive digital media, such as FLITARA, is a promising approach in addressing literacy issues in primary schools, especially in the current era of technology and digital education transformation. FLITARA not only provides a solution to students' low literacy skills, but also an educational innovation that can harmoniously bridge modernity with tradition.

## CONCLUSION

In conclusion, this study has demonstrated that FLITARA, a culture-based interactive flipbook, is an effective innovation for enhancing reading literacy at the elementary school level. Unlike conventional learning media, FLITARA integrates Nusantara folklore with interactive features such as barcode-based quizzes and collaborative activities, allowing students to engage more actively in the learning process. The contribution of this research lies not only in its ability to improve literacy outcomes but also in its role in strengthening cultural literacy and character education. This dual impact confirms the relevance of FLITARA as both a pedagogical advancement and a strategic medium to preserve national identity in the digital era. This study, however, is not without limitations. The implementation of FLITARA relies heavily on the availability of digital devices and stable internet connectivity, which are not uniformly accessible across all schools. In addition, the scope of this study was limited to a single school context, which restricts the generalizability of the findings. Therefore, future research should focus on testing FLITARA in schools with diverse socio-economic and geographical backgrounds to ensure broader applicability. Long-term studies are also necessary to examine the sustainability of its impact on literacy, cultural appreciation, and students' character formation. The implications of this research suggest that technology-based media grounded in local cultural values can serve as a powerful tool in addressing literacy challenges in elementary schools. For practice, the development of a hybrid version combining digital and printed formats is strongly recommended to overcome the infrastructural barriers faced by many schools, thereby ensuring equitable access for all students. For policymakers, the findings highlight the urgency of supporting the integration of digital literacy media into the national curriculum as part of broader educational reforms. Teachers and school leaders are encouraged to adopt and adapt FLITARA in their classrooms while continuously receiving training in digital pedagogy. In this way, FLITARA can serve not only as a classroom innovation but also as a scalable model to promote literacy and cultural identity in line with national education goals.

## REFERENCES

Abidin í, Y., Rakhmayanti, F., & Undayasari, D. (2025). Factors affecting literacy ability of elementary school students in Indonesia. *Mimbar Sekolah Dasar*, 12(2), 179–192. https://doi.org/10.53400/mimbar-sd.v12i2.86486

Agustin, P., Setianto, B., Balya, D., Allam, A. S., Daniaturrohmah, F., & Wardana, H. (2024). Upaya Mengurangi rendahnya minat literasi pada siswa kelas 6 SDN Plerean 2 Kabupaten Jember [Efforts to Reduce the Low Literacy Interest of Sixth Grade Students at Plerean 2 Public Elementary School, Jember Regency]. *Kreativasi*, *3*(2), 175-189. https://doi.org/10.33369/kreativasi.v3i2.36596

Dahliana, D., Radila, G., & Khairunnisa, E. (2024). Educational comics based on creative problem solving with the aid of Kvisoft flipbook maker pro for elementary school. *Education Achievement: Journal of Science and Research*, 1-6. https://doi.org/10.51178/jsr.v5i1.1737

Dewi, N. P. S. R., & Wibawa, I. M. C. (2024). Enhancing students' science literacy through Megedong-Gedongan: A balinese local culture-based flipbook. *Journal of Curriculum and Teaching*, *13*(4), 331. https://doi.org/10.5430/jct.v13n4p331

Dzakiyah, M., Shidiq, A., & Permana, R. (2023). Development of Flipbook-Based Thematic Learning to Improve Elementary School Students Learning Outcomes. *Indonesian Journal of Classroom Action Research Journal Homepage*, *1*(1), 22-26. https://doi.org/10.53866/ijcar.v1i1.300

Fatmawati, F., & Wulandari, F. (2024). Flipbook-based e-module MABEJA improves cognitive learning in Grade IV. *Indonesian Journal of Education Methods Development*. https://doi.org/10.21070/ijemd.v19i4.854

Fatonah, K., & Muzaki, A. (2024). Optimizing interactive flipbooks as a literacy learning media in elementary school. *In Proceeding of the International Conference on Global Education and Learning*. *Prosiding ARIPI.* 1 (1). https://prosiding.aripi.or.id/index.php/ICGEL/article/view/104

Hidayat, A., Gunansyah, G., & Puspita, A. M. I. (2025). The role of indigenous culture-based augmented reality media in improving cultural understanding in elementary schools. *Journal of Innovation and Research in Primary Education*, *4*(3), 576–584. https://doi.org/10.56916/jirpe.v4i3.1373

Hidayat, F., & Muhamad, N. (2021). Model Addie (Analysis, Design, Development, Implementation and Evaluation) Dalam Pembelajaran Pendidikan Agama Islam. *J. Inov. Pendidik. Agama Islam*, *1*(1), 28-37. https://doi.org/10.15575/jipai.v1i1.11042

Irpan, Sutisnawati, A., & Hamdani Maula, L. (2024). Penerapan materi ajar berbasis kearifan lokal untuk meningkatkan pemahaman budaya pada siswa sekolah dasar negeri Cikarang kelas III [The Implementation of local wisdom-based teaching materials to enhance cultural understanding among third grade students at Cikarang Public Elementary School] . *Journal of Elementary Education*, 07. https://doi.org/10.22460/collase.v7i2.22546

Kemendikdasmen. (2023). Optimalisasi Program Buku Bacaan Bermutu untuk Penguatan Literasi Indonesia [Optimization of the Quality reading book program to strengthen literacy in Indonesia]. https://pskp.kemdikbud.go.id/

Lake, A. C. R., Lipikuni, H. F., & Jenahut, K. S. (2023). Pengembangan media pembelajaran flipbook cerita rakyat Nusa Tenggara Timur untuk meningkatkan literasi budaya siswa. *Cakrawala Indonesia*, *8*(1), 1-10. https://doi.org/10.55678/jci.v8i1.872

Layyina, H., Erni, S., & Barokah, I. (2023). Development of Local Culture-Based Pop-Up Book Media to Improve Students' Reading Literacy in Elementary Schools. *International Journal of Research and Review*, *10*(2), 196–202. https://doi.org/10.52403/ijrr.20230225

Legi, H., Damanik, D., & Giban, Y. (2023). Transforming education through technological innovation in the face of the era of society 5.0. *Jurnal Ilmiah Pendidikan*, 2(2).

Lin, F., Lin, H.-H., & Chang, S.-L. (2023). Programming E-Books: Culture, english, and scratch for schoolchildren of Rural Taiwan. *IEEE Transactions on Education*, *66*, 62–72. https://doi.org/10.1109/TE.2022.3185318

Listyana, I. G. A. A. P., Suarjana, I. M., & Antara, P. A. (2024). Enhancing learning creativity and computational thinking through coding-based flipbook media in elementary education. *Journal of Education Technology*, *8*(3), 534–542. https://doi.org/10.23887/jet.v1i1.91520

Malik, M. S., & Maemunah. (2020). Basic age children's literacy skills (Study of Language development analysis for children aged 7-12 Years in Madrasah Ibtidaiyah (MI) Salafiyah Tajungsari, Tlogowungu District, Pati Regency). *JIP (Jurnal Ilmiah PGMI)*, *6*(2). https://jurnal.radenfatah.ac.id/index.php/jip/article/view/5754

Manalu, M. A., Apriliya, S., & Lidinillah, A. M. (2025). Indonesian Journal of Primary Education Needs analysis for the development of a children's story flipbook on tugu's traditional pindang serani for elementary school students. © *2025-Indonesian Journal of Primary Education, 9*(1), 19–28. https://vm36.upi.edu/index.php/IJPE/article/download/66854/pdf

Maulidya, S. A. (2024). 1stFlip Flipbook creator-assisted e-module to advance learning quality in elementary schools. *International Journal of Elementary Education*. https://doi.org/10.23887/ijee.v8i2.78076

Morita, R., Watanabe, K., Zhou, J., Dengel, A., & Ishimaru, S. (2025). GenAIReading: Augmenting human cognition with interactive digital textbooks using large language models and image generation models. In *Proceedings of the Augmented Humans International Conference 2025* (pp. 289-301). http://arxiv.org/abs/2503.07463

Munawwaroh, D. A., Mariana, N., & Ekawati, R. (2025). Analysis of the Need for the Development of Ethnomathematics-Based Flipbook Media to Improve Understanding of Measurement Concepts in Elementary Schools. *Journal of Innovation and Research in Primary Education*, *4*(3), 705–713. https://doi.org/10.56916/jirpe.v4i3.1440

Musaddad, R. B. M., Desvani, V. R., Saputri, I. D., & Nugraheni, L. (2025). Penguatan pendidikan karakter melalui cerita rakyat berbasis media flibook untuk siswa sekolah dasar [Strengthening character education through folktales based on flipbook media for elementary school students]. *Morfologi: Jurnal Ilmu Pendidikan, Bahasa, Sastra dan Budaya*, *3*(4), 203-212. https://doi.org/10.61132/morfologi.v3i4.1886

Nafiah, N., Syamsul Ghufron, Sri Hartatik, Pance Mariati, & Afib Rulyansah. (2023). The effect of flipbook-based digital books on elementary school students' interest in learning. *World Journal on Educational Technology:* Current Issues, 15(4), 342–354. https://doi.org/10.18844/wjet.v15i4.7833

Nanda, D. W., & Azmy, K. (2020). Poor reading comprehension issue in efl classroom among indonesian secondary school students: Scrutinizing the causes, impacts and possible solutions. Englisia: *Journal of Language, Education, and Humanities, 8*(1), 12. https://doi.org/10.22373/ej.v8i1.6771

Nugroho, S. A., Wardana, R., Widodo, T. W., Setyoko, U., Mastuti, L., Ali, F. Y., & Novenda, I. L. (2023). Pemanfaatan buku sebagai motivasi minat baca siswa di SD Negeri Pace 05 Kabupaten Jember [Utilization of books as a motivation to increase students' reading interest at pace 05 public elementary school, Jember Regency]. *Jumat Pendidikan: Jurnal Pengabdian Masyarakat*, 4(1), 25-31. https://doi.org/10.32764/abdimaspen.v4i1.3524

Octaviana, S., Widiyono, A., & Muzakki, M. A. (2025). The effect of flipbook media on improving critical thinking skills of grade 5 IPAS Students. *Mimbar PGSD Undiksha*, *13*(2), 337–345. https://doi.org/10.23887/jjpgsd.v13i2.94819

OECD. (2023). *PISA 2022 Results (Volume I)*. OECD Publishing. Diakses dari https://doi.org/10.1787/53F23881-EN

Pangestu, R. S., Wardani, K., Cahyandaru, P., & Setyawan, A. D. (2024). Pengembangan media flipbook digital untuk meningkatkan budaya literasi pada pembelajaran IPAS Kelas IV SD Negeri Bhayangkara Yogyakarta [Development of Digital Flipbook Media to Enhance Literacy Culture in natural and social science Learning for Fourth Grade Students at Bhayangkara Public Elementary School, Yogyakarta]. *Authentic Education*, *1*(1), 26-39. https://doi.org/10.71264/aej.v1i1.11

Perpustakaan Nasional Republik Indonesia. (2024). *IPLM 2024 catat rekor tinggi, literasi nasional semakin meningkat*. Diakses dari https://www.perpusnas.go.id/berita/iplm-2024-catat-rekor-tinggi-literasi-nasional-semakin-meningkat

Prameswari, C., Amita T, P., & Kusumawati, N. (2023). Pengembangan media pembelajaran flipbook untuk menambah pemahaman siswa pada materi keragaman suku bangsa dan budaya pada siswa kelas V SDN Glonggong 04 Kabupaten Madiun [Development of flipbook learning media to enhance students' understanding of ethnic and cultural diversity material for fifth grade students at Glonggong 04 Public Elementary School, Madiun Regency]. *Jurnal Perseda: Jurnal Pendidikan Guru Sekolah Dasar*, *6*(2). https://jurnal.ummi.ac.id/index.php/perseda/article/view/162-171

Pramesti, R. A., & Wahyudi, W. (2025). Development of Culture-Based Interactive Comic Media to Improve Mathematical Literacy in Primary Schools. *Electronic Journal of Education, Social Economics and Technology*, *6*(1), 755–765. https://doi.org/10.33122/ejeset.v6i1.651

Purnomo, P. E. A., Agustini, K., & Sudatha, I. G. W. (2024). Peran flipbook sebagai media pembelajaran inovatif dalam pembelajaran abad 21 [The role of flipbook as an innovative learning media in 21st century education]. *Jurnal Riset Dan Inovasi Pembelajaran*, 4(3), 2001–2015. https://doi.org/10.51574/jrip.v4i3.2286

Putra, A. D., Yulianti, D., & Fitriawan, H. (2023). Pengembangan bahan ajar berbasis flipbook digital untuk meningkatkan efektivitas pembelajaran pada siswa sekolah dasar [Development of digital flipbook-based teaching materials to improve learning effectiveness for elementary school students]. *JIIP-Jurnal Ilmiah Ilmu Pendidikan*, *6*(4), 2173-2177. https://doi.org/10.54371/jiip.v6i4.1748

Putri, F. A. Y., & Fatimah, I. D. (2025). The feasibility of Kopikaya learning media (smart box of cultural diversity) to improve the learning outcomes of grade V Elementary School Students. *Jurnal Pendidikan Dasar Nusantara*, *11*(1), 160–170. https://doi.org/10.29407/jpdn.v11i1.26170

Putri, I. T. A., Agusdianita, N., & Desri, D. (2024). Literasi dalam meningkatkan kemampuan berpikir kritis peserta didik sekolah dasar era digital. In *Social, Humanities, and Educational Studies (SHES): Conference Series* (Vol. 7, No. 3). https://doi.org/10.20961/shes.v7i3.92427

Qureshi, M. I., Khan, N., Raza, H., Imran, A., & Ismail, F. (2021). Digital technologies in education 4.0. Does it enhance the effectiveness of learning? *International Journal of Interactive Mobile Technologies*, 15(4), 31–47. https://doi.org/10.3991/IJIM.V15I04.20291

Resti, Wati, R. A., Ma'Arif, S., & Syarifuddin, S. (2024). Pemanfaatan media pembelajaran berbasis teknologi sebagai alat untuk meningkatkan kemampuan literasi digital siswa sekolah dasar [Utilization of technology-based learning media as a tool to enhance digital literacy skills of elementary school students]. *Al Madrasah Jurnal Pendidikan Madrasah Ibtidaiya*, 8(3), 1145. https://doi.org/10.35931/am.v8i3.3563

Ristanti, I., Apriliya, S., & Muslihin, H. Y. (2025). Utilizing google sites to improve reading literacy in elementary schools. *Jurnal Cakrawala Pendas*, *11*(3), 727–740. https://doi.org/10.31949/jcp.v11i3.14305

Rohman, A. (2022). Literasi dalam meningkatkan kemampuan berpikir kritis di era disrupsi [Literacy in enhancing critical thinking skills in the disruption era]. *EUONIA (Jurnal Pendidikan Bahasa Indonesia)*, 2(1), 40–47. http://dx.doi.org/10.30821/eunoia.v2i1.1318

Sapari, A., & Elhawwa, T. (2023). Analisis Kesulitan Pemahaman Tanda Baca Peserta Didik pada Pembelajaran Bahasa Indonesia Kelas IV SDN 3 Menteng Palangkaraya [Analysis of difficulty understanding students in class IV at public elementary school 3 Menteng Palangkaraya]. *Pedagogik: Jurnal Pendidikan,* 18(2), 170-174. https://journal.umpr.ac.id/index.php/pedagogik/article/view/5436

Saputra, A., Sabrina, N., Wijayanti, I., & Setiyoko, T. (2025). Pentingnya mengenalkan keragaman budaya di sekolah dasar [he importance of introducing cultural diversity in elementary schools]. *Jurnal Ilmiah Pendidikan*, 11(1), 116–125. https://doi.org/10.47662/pedagogi.v11i1.913

Sumarni, M. L., Jewarut, S., Silvester, S., Melati, F. V., & Kusnanto, K. (2024). Integrasi nilai budaya lokal pada pembelajaran di sekolah dasar [Integration of local cultural values in elementary school learning]. *Journal of Education Research*, *5*(3), 2993-2998. https://doi.org/10.37985/jer.v5i3.1330

Suniati. (2016). Studi tentang rendahnya kemampuan membaca peserta didik kelas II SDN-8 Menteng Palangka Raya [A Study on the low reading ability of second grade students at public elementary school 8 Menteng Palangka Raya]. *Anterior Jurnal,* Volume 16 Nomor 1. https://doi.org/10.33084/anterior.v16i1.73

Suryana, E., Prasyur Aprina, M., & Harto, K. (2022). Suryana, E., Aprina, M. P., & Harto, K. (2022). Teori konstruktivistik dan implikasinya dalam pembelajaran [Constructivist theory and its implications in learning]. *JIIP-Jurnal Ilmiah Ilmu Pendidikan*, *5*(7), 2070-2080. https://doi.org/10.54371/jiip.v5i7.666

Talentiano, R., Chamdani, M., Basari, A., & Wahyudi, E. (2025). Analisis Kemampuan Literasi Membaca Peserta Didik Kelas IV SD Negeri Sitibentar Tahun Ajaran 2023/2024 [Analysis of reading literacy skills of fourth grade students at Sitibentar public elementary school in the 2023/2024 academic year]. *Kalam Cendekia: Jurnal Ilmiah Kependidikan, 13 (1).* *https://doi.org/10.20961/jkc.v13i1.87605*

Tirtawati, I. G. A., Wibawa, I. M. C., & Dharmayanti, P. A. (2025). Development of problem-solving-based flipbook learning media to improve science learning outcomes of fifth grade elementary school students. *Journal of Education Technology*, *9*(2), 353–363. https://doi.org/10.23887/jet.v9i2.91622

Wahab, F. A., Malabar, S., & Isa, Abd. H. (2025). Enhancing elementary literacy through flip PDF: Developing interactive reading materials for engaged learning. *International Journal of Science and Research Archive*, *14*(1), 570–575. https://doi.org/10.30574/ijsra.2025.14.1.0125

Widari, N. M. P. A., & Putra, D. K. N. S. (2022). Pengembangan Media Pembelajaran E-Komik berbasis pendekatan konstruktivisme pada muatan IPA materi siklus hidup hewan siswa kelas IV SD [Development of e-comic learning media based on a constructivist approach for science content on animal life cycles for fourth grade elementary school students]. *Jurnal Pendidikan Dan Konseling*, *4*(2), 518-526. https://www.neliti.com/publications/442476/pengembangan-media-pembelajaran-e-komik-berbasis-pendekatan-konstruktivisme-pada