Developing Digital Storytelling Using A Multi-Plot Flipbook *"Singaraja Adventures"* For 6th-Grade Students At Undiksha Laboratory Elementary School

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Abstract

This study aimed to examine students' learning needs, develop the "Singaraja Adventures" Multi-Plot Flipbook, describe its implementation, and evaluate its quality. Guided by the ADDIE model, the research involved 52 sixth-grade students and an English teacher at UNDIKSHA Laboratory Elementary School. Data were gathered via observations, questionnaires, syllabus analysis, expert judgments, and learning assessments. Needs analysis revealed high demands for interactive digital storytelling, scoring 4.3 on average. Expert evaluations rated the product 84%–90%, whereas student responses reached 4.07. Mean student achievement scores were 8.00 in Class 6A and 7.00 in Class 6B. These results demonstrate that the flipbook is a suitable, engaging learning medium, though further empirical research is recommended.

Keyword: *Digital storytelling, Multi-Plot Flipbook, English learning, ADDIE.*

Abstrak

Penelitian ini bertujuan untuk mengidentifikasi kebutuhan belajar siswa, mengembangkan Multi-Plot Flipbook "Singaraja Adventures," mendeskripsikan implementasinya, serta mengevaluasi kualitasnya. Menggunakan model ADDIE, penelitian melibatkan 52 siswa kelas VI dan satu guru bahasa Inggris di UNDIKSHA Laboratory Elementary School. Data dikumpulkan melalui observasi, kuesioner, analisis silabus, evaluasi ahli, dan penilaian hasil belajar. Analisis kebutuhan menunjukkan media digital interaktif dan storytelling sangat dibutuhkan, dengan rata-rata skor 4,3. Evaluasi ahli menghasilkan penilaian 84%–90%, sedangkan respons siswa mencapai rata-rata 4,07. Nilai rata-rata siswa adalah 8,00 di kelas 6A dan 7,00 di kelas 6B. Temuan ini menegaskan bahwa flipbook tersebut layak dan menarik sebagai media pembelajaran bahasa Inggris, meskipun penelitian lanjutan tetap diperlukan.

Kata Kunci: Digital storytelling, Multi-Plot Flipbook, pembelajaran bahasa Inggris, ADDIE.

INTRODUCTION

English plays an important role in global communication, education, and access to information. Therefore, introducing English at the elementary level is essential for developing students' language skills and supporting future learning (Anggraini & Sriemulyaningsih, 2024; Aisy et al., 2026; Ritonga & Khadijah, 2025). However, Indonesia ranked 80th out of 113 countries in the 2025 English Proficiency Index, with a score of 471, indicating a need to improve English education. Preliminary observations conducted at UNDIKSHA Laboratory Elementary School on July 27–28, 2026, involving classroom observations, syllabus analysis, and interviews with an English teacher and 52 sixth-grade students, revealed that conventional teaching methods and limited interactive media affected students' engagement and participation. These findings indicate the need for more engaging and interactive learning resources.

Technology-based learning provides an opportunity to address these challenges. Santosa et al. (2022) reported that an interactive, technology-based gamification guidebook could enhance students' engagement in English learning. Similarly, Digital Storytelling combines narratives with multimedia elements to create meaningful and engaging learning experiences (Korosidou & Griva, 2024). Previous studies

have shown that Digital Storytelling can support vocabulary acquisition, reading comprehension, motivation, speaking skills, and classroom participation (Sembiring et al., 2023; Drajati et al., 2023; Asyadi et al., 2025; Efendi et al., 2026). Aulia et al. (2024) also highlighted the contribution of multimedia elements, including text, images, audio, and video, to students' literacy development. These findings suggest that Digital Storytelling can provide contextualized language learning while encouraging active participation.

To implement Digital Storytelling effectively, learning media should also be accessible and easy to use. Kusuma (2022) emphasized the importance of flexible and user-friendly technology-based media in English language teaching. Furthermore, Suardewa et al. (2024) highlighted the influence of teachers' self-efficacy on their intention to integrate technology into instruction. One potential medium is a digital flipbook, which resembles a printed book while incorporating multimedia and interactive features (Muna et al., 2025). Interactive digital media can also support vocabulary learning and retention (Arsini et al., 2022). Previous studies have demonstrated the potential of flipbooks to improve learning engagement and comprehension. Izzati (2022) explored digital storytelling flipbooks for young learners, while Safana et al. (2024) reported increased student interest and participation through interactive flipbook development. Similarly, Triatna et al. (2025) and Pratiwi et al. (2026) reported positive findings regarding digital flipbooks in early literacy and reading development.

Despite these benefits, many existing digital storytelling and flipbook materials employ linear narratives in which students follow predetermined events. Such structures provide limited opportunities for students to influence story development through their choices. Therefore, integrating a multi-plot structure offers an alternative approach to making digital storytelling more interactive. Through multiple story paths and alternative endings, students can actively explore narratives, make decisions, and engage with learning materials. The storylines and language activities can also be organized gradually to help students process information without unnecessary cognitive demands, consistent with the learning considerations discussed by Sari et al. (2025). However, research on multi-plot digital storytelling flipbooks for elementary English instruction remains limited.

In addition to interactivity, familiar cultural contexts can make language learning more meaningful. Ratminingsih et al. (2023) emphasize the importance of interactive learning experiences and themes relevant to young learners' everyday lives. Accordingly, this study develops Singaraja Adventures, a multi-plot digital storytelling flipbook that incorporates local places and cultural elements from Singaraja, Bali. By connecting English learning with familiar surroundings, the product is intended to help students understand language in meaningful contexts while exploring different story paths.

Based on these considerations, this study aims to develop and evaluate the Singaraja Adventures Multi-Plot Digital Storytelling Flipbook for sixth-grade students at UNDIKSHA Laboratory Elementary School. Using a Research and Development (R&D) design based on the ADDIE model—Analysis, Design, Development, Implementation, and Evaluation—the study examines students' learning needs, product design and development, classroom implementation, and product quality and learning outcomes. The study is expected to provide an interactive, accessible, and culturally relevant alternative for supporting elementary students' English learning.

Research Method

This study employed a Research and Development (R&D) design guided by the ADDIE model, as described by Sugiyono (2023), to develop and evaluate the Digital Storytelling product Singaraja Adventures, a Multi-Plot Flipbook designed to support English language learning among sixth-grade elementary school students. The ADDIE model consists of five stages: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation. The product's feasibility and quality were assessed using an evaluation framework adapted from Daryanes et al. (2023), while the Guttman scale, adapted from Irmasari and Hasibuan (2023), was used for relevant questionnaire items. The evaluation examined the product's quality, classroom applicability, and potential to support students' English learning outcomes.

At the analysis stage, the researcher identified students' English learning needs and the challenges they encountered during the learning process. Data were collected through classroom observations, questionnaires, and syllabus analysis to examine the existing learning conditions, students' needs, and curriculum requirements. The findings from this stage served as the basis for determining the learning objectives, content, and specifications of the digital learning media.

The first instrument used at this stage was an observation sheet adapted from Daryanes et al. (2023). The observation sheet consisted of four main domains: (1) Planning and Preparation, (2) Classroom Environment, (3) Instruction, and (4) Professional Responsibilities. Each observation item was classified according to its corresponding domain. For example, learning objectives and lesson planning were included in Domain 1 (Planning and Preparation), while teacher–student interactions and student motivation were classified under Domain 2 (Classroom Environment) and Domain 3 (Instruction). These domains provided a framework for examining classroom conditions, teaching practices, student engagement, and the implementation of English language instruction. The observation sheet used to examine the teaching and learning process is presented in below:

Table 1Observation Sheet Adapted from Daryanes et al. (2023)

No	Observation Question	Categories	Response
1	Are the learning objectives clearly communicated to students?	Domain 1: Planning and Preparation	
2	How is the lesson structured and implemented?	Domain 1: Planning and Preparation	
3	To what extent does the teacher interact effectively with students?	Domain 2: The Classroom Environment	
4	How does the teacher support the development of speaking, listening, reading, and writing skills in English?	Domain 3: Instruction	
5	Is technology used to support English language learning?	Domain 1: Planning and Preparation Domain 3: Instruction	
6	How does the teacher assess students' understanding of the lesson?	Domain 3: Instruction	
7	What challenges do students face during classroom learning activities?	Domain 2: The Classroom Environment	
8	What is the level of student motivation during the learning process?	Domain 2: The Classroom Environment	
9	Is the teaching material appropriate to students' level of understanding and interest?	Domain 1: Planning and Preparation	
10	Do the learning materials align with instructional material principles?	Domain 1: Planning and Preparation	

The second instruments were teacher and student needs questionnaires adapted from Daryanes et al. (2023). These questionnaires were administered to identify the requirements and expectations of both teachers and students regarding the development of digital English learning media. The teacher questionnaire focused on instructional needs, the availability and use of learning resources, the integration of technology, and the features required to support English language teaching. Meanwhile, the student questionnaire focused on students' learning preferences, difficulties in learning English, interest in interactive learning activities, and expectations regarding digital learning media.

The questionnaires used a five-point Likert scale to measure the respondents' level of need. The response categories ranged from 1 (Strongly Do Not Need), 2 (Do Not Need), 3 (Neutral), 4 (Need), to 5 (Strongly Need). The questionnaire results were used to identify the most relevant features and content required for the development of the digital storytelling flipbook. The teacher and student questionnaire instruments are presented in below:

Table 2 Questionnaire Sheet for Teachers Adapted from Daryanes et al. (2023)

No	Question	Strongly Do Not Need	Do Not Need	Neutral	Need	Strongly Need
1.	I need interactive digital media for teaching English to enhance student engagement and make learning more interesting.	☐	☐	☐	☐	☐
2.	I need technology with sound, animation, or video features to clarify concepts, improve students' understanding, and create a more immersive learning experience.	☐	☐	☐	☐	☐
3.	I need a user-friendly digital learning platform to integrate technoiogy into teaching without technical batriers.	☐	☐	☐	☐	☐
4.	I need easily accessible and intuitive technology to use it effectively in teaching without significant difficulties.	☐	☐	☐	☐	☐
5.	I need digital assessment tools to evaluate students' understanding, assess the effectiveness of learning, and provide more accurate feedback.	☐	☐	☐	☐	☐
6.	I need interactive storytelling-based digital media to make learning more engaging by allowing students to choose their own path, increasing engagement, and fostering creativity.	☐	☐	☐	☐	☐
7.	I need technology that encourages active student participation to create a more interactive learning environment and strengthen students' understanding through direct experience.	☐	☐	☐	☐	☐
8.	I need interactive digital books as a solution for delivering material in a more engaging way, combining text, images, and interactive elements.	☐	☐	☐	☐	☐
9.	I need devices such as computers, tablets, or projectors to support the integration of technology into learning and ensure optimal access for students.	☐	☐	☐	☐	☐
10.	I need interactive digital technology to enhance student engagement, so they become more motivated and can retain learning materials for a longer time.	☐	☐	☐	☐	☐

Table 3 Questionnaire Sheet for Student's Adapted from Daryanes et al. (2023)

No	Question	Strongly Do Not Need	Do Not Need	Neutral	Need	Strongly Need
1.	I need interactive digital media to help me learn English in a more engaging, varied, and personalized way that suits my learning style.	☐	☐	☐	☐	☐
2.	I need technology with sound, animation, or video features to better understand the material through a more immersive and contextual learning experience.	☐	☐	☐	☐	☐
3.	I need an easy-to-use digital learning platform to access and utilize technology without technical barriers that hinder the learning process.	☐	☐	☐	☐	☐
4.	I need technology that provides feedback in learning to understand how well I have mastered the material and adjust my learning strategies more effectively.	☐	☐	☐	☐	☐
5.	I need interactive storytelling-based digital media to choose my own learning path, increase motivation, engagement, and develop critical thinking skills.	☐	☐	☐	☐	☐
6.	I need technology that encourages active participation so I can interact more, explore, and engage in learning, making me an active participant in the learning process.	☐	☐	☐	☐	☐
7.	I need interactive digital books to create a more engaging learning experience by combining text, images, and interactive elements to enhance my understanding.	☐	☐	☐	☐	☐
8.	I need devices such as computers, tablets, or projectors to access digital learning media more effectively and support a more dynamic and interactive learning experience.	☐	☐	☐	☐	☐
9.	I need interactive digital technology to create a more engaging learning experience, boost my motivation, and help me retain material more effectively.	☐	☐	☐	☐	☐
10.	I need interactive digital media to help me learn English in a more engaging, varied, and personalized way that suits my learning style.	☐	☐	☐	☐	☐

The questionnaire data were analyzed using a weighted average score formula based on the five-point Likert scale adapted from Daryanes et al. (2023). This quantitative analysis was conducted to determine the level of teachers' and students' needs and preferences regarding the proposed digital learning media. The average score was calculated by multiplying the frequency of each response by its corresponding Likert scale weight and dividing the total by the number of respondents. The formula is presented as follows:

$$\text{Average Score} = \frac{(f_1 \times 1) + (f_2 \times 2) + (f_3 \times 3) + (f_4 \times 4) + (f_5 \times 5)}{N}$$

Notes:

- (f_1) = Number of respondents selecting 1 (Strongly Do Not Need).
- (f_2) = Number of respondents selecting 2 (Do Not Need).
- (f_3) = Number of respondents selecting 3 (Neutral).
- (f_4) = Number of respondents selecting 4 (Need).
- (f_5) = Number of respondents selecting 5 (Strongly Need).
- (N) = Total number of respondents answering the questionnaire statement.

In this formula, each response frequency was multiplied by its corresponding Likert scale weight, ranging from 1 to 5. This calculation ensured that the average score represented both the distribution and the level of need indicated by the respondents. The resulting average scores were then classified using the interpretation criteria adapted from Irmasari and Hasibuan (2023). These criteria provided a systematic basis for interpreting the respondents' levels of need and identifying the technological and instructional requirements for developing the Singaraja Adventures digital storytelling flipbook. The interpretation criteria are presented in below:

Table 4 Interpretation of Average Needs Scores Adapted from Irmasari and Hasibuan (2023)

Average Score	Category
4.3 – 5.0	Strongly Need
3.5 – 4.2	Need
2.5 – 3.4	Neutral
1.5 – 2.4	Do Not Need
0 – 1.4	Strongly Do Not Need

Based on these interpretation criteria, higher average scores indicated a greater level of need for the proposed digital learning media, while lower scores indicated that the corresponding features or learning requirements were considered less necessary by the respondents. The results of this analysis were subsequently used as a reference for determining the content, interactive features, and instructional components of the digital storytelling flipbook.

The third instrument was syllabus analysis, which was conducted to examine the current syllabus used in English language teaching at the school. This analysis was important to ensure that the proposed learning product was developed in accordance with the applicable curriculum, addressed students' learning needs, and aligned with the English learning objectives for Grade 6 students at UNDIKSHA Laboratory Elementary School. The researcher examined the English syllabus to identify the expected learning outcomes, learning objectives, relevant topics, language elements, and instructional materials appropriate for the students' grade level.

Next, the design stage involved translating the conceptual blueprint of the Multi-Plot Digital Storytelling Flipbook into a concrete structural framework. This comprehensive process encompassed outlining the branching narrative pathways, structuring the pedagogical learning materials, designing engaging student activities, curating appropriate visual elements, and embedding multimedia features such as background audio and interactive buttons to optimize the user experience.

Subsequently, during the development stage, the researcher transformed this initial blueprint into a fully functional digital product utilizing advanced authoring tools, specifically Canva for graphic design layout and Flip PDF for interactive page-turning and multimedia integration.

Once the prototype was successfully constructed, the preliminary version of the developed flipbook was subjected to a rigorous evaluation by expert validators, comprising both content and media specialists. Their invaluable feedback, constructive evaluations, and specific suggestions served as the empirical foundation for revising, refining, and polishing the digital learning medium. These iterative improvements ensured that the flipbook met high educational and technical standards before its final implementation in the primary school classroom.

After that, The implementation stage involved The implementation stage involved introducing and using the developed flipbook in English lessons with 52 sixth-grade students from classes 6A and 6B at UNDIKSHA Laboratory Elementary School, accompanied by one English teacher. During the learning process, the teacher facilitated students' use of the flipbook by explaining its navigation and learning procedures, guiding them through the storylines, and supporting their engagement with the learning materials and activities. Students interacted with the narrative, explored different story paths, and completed the embedded quizzes and assessment tasks.

At this stage, the researcher collected data to describe how the Multi-Plot Flipbook Singaraja Adventures was implemented during the learning process and how students responded to its use in the classroom. The data were collected through Assignment Sheets, Teacher Feedback Forms, Student Feedback Forms, and Implementation Notes. These instruments provided information about students' learning achievement, responses to the learning media, classroom participation, and the teacher's evaluation of the implementation process.

The Assignment Sheets were analyzed quantitatively using the percentage of learning achievement formula to determine students' achievement after using the developed learning media. The percentage was calculated by dividing the total score obtained by the students by the maximum possible score and multiplying the result by 100. The formula is presented as follows:

$$\text{Percentage of Achievement} = \frac{\text{Total Score Obtained}}{\text{Maximum Possible Score}} \times 100$$

In this formula:

- Total Score Obtained represents the accumulated score achieved by the students.
- Maximum Possible Score represents the highest total score that could be obtained.
- 100 is used to convert the result into a percentage.

This calculation provided an overview of students' learning achievement after participating in English learning activities using the Multi-Plot Flipbook Singaraja Adventures. The results were used to describe students' achievement in completing the assigned learning tasks.

In addition to the Assignment Sheets, Teacher Feedback Forms and Student Feedback Forms were administered to obtain further information about the implementation of the learning media. The Teacher Feedback Forms were designed to collect the teacher's evaluation and perceptions of the flipbook, particularly regarding its content, appearance, usability, and contribution to the English learning process. Meanwhile, the Student Feedback Forms were used to identify students' responses and perceptions after using the developed learning media. The instruments are presented in Tables 5 and 6, respectively.

Table 5 Teacher Feedback Form

TEACHER FEEDBACK FORM	
Date:	
Teacher Name:	
Teacher Class:	
Feedback Questions:	
Question	Response (Yes/No)
1. Was the flipbook effective in your teaching?	Yes / No
2. Did the students engage with the flipbook?	Yes / No
3. Did you face any challenges while using the flipbook?	Yes / No
4. Would you suggest improvements for the flipbook?	Yes / No
5. Do you have any additional comments or suggestions?	Yes / No
Teacher comments / suggestions	

The Teacher Feedback Forms were analyzed descriptively to obtain the teacher's observations, opinions, and evaluation of the developed learning media. The feedback provided supporting information regarding the suitability, usability, and contribution of the Multi-Plot Flipbook Singaraja Adventures to the English language teaching and learning process.

Table 6 Student Feedback Form

STUDENT FEEDBACK FORM	
Date:	
Student Name:	
Class:	
1. Was the flipbook easy and interesting to use in class? (Yes/No)	
2. Did the flipbook help you understand the lesson better? (Yes/No)	
3. Did you face any difficulty while reading or using the flipbook? (Yes/No)	
4. Do you enjoy learning using this flipbook compared to standard books? (Yes/No)	
5. Do you have any suggestions to make the flipbook better ? (Yes/No)	
Student comments / suggestions	

Meanwhile, The Student Feedback Forms were analyzed using the average score formula based on the five-point Likert scale adapted from Daryanes et al. (2023). This analysis aimed to determine students' responses and perceptions regarding the implementation of the digital storytelling flipbook. The questionnaire used five response categories: 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly Agree). The average score was calculated by multiplying the frequency of each response by its corresponding Likert scale weight and dividing the total by the number of respondents. The formula is presented as follows:

$$\text{Average Score} = \frac{(f1\times1) + (f2\times2) + (f3\times3) + (f4\times4) + (f5\times5)}{N}$$

Notes:

- (f_1) = Number of students selecting 1 (Strongly Disagree).
- (f_2) = Number of students selecting 2 (Disagree)
- (f_3) = Number of students selecting 3 (Neutral).
- (f_4) = Number of students selecting 4 (Agree).
- (f_5) = Number of students selecting 5 (Strongly Agree).
- (N) = Total number of students responding to the feedback statement.

This calculation ensured that the average score accounted for both the frequency of responses and the level of agreement represented by each response. The resulting average scores were then classified according to the interpretation criteria adapted from Irmasari and Hasibuan (2023). These criteria were used to systematically interpret students' responses and evaluate their perceptions of the developed digital storytelling flipbook. The interpretation criteria are presented in below:

Table 7 Interpretation of Average Scores from the Student Feedback Forms Adapted from Irmasari and Hasibuan (2023)

SCORE	CATEGORY
4.3 – 5.0	Strongly Agree
3.5 – 4.2	Agree
2.5 – 3.4	Neutral
1.5 – 2.4	Disagree
0 – 1.4	Strongly Disagree

Furthermore, the Implementation Notes were analyzed descriptively to document classroom activities, students' participation, interactions, engagement with the storylines, and the use of the flipbook throughout the teaching and learning process.

Finally, the evaluation stage was conducted to assess the quality, feasibility, and suitability of the developed product, as well as its contribution to students' English language learning. This stage involved three evaluation components: expert assessments, student feedback questionnaires, and students' learning achievement results. Formative evaluation was conducted throughout the development process

to improve the product based on expert suggestions and recommendations, while the overall evaluation was carried out after classroom implementation to determine the effectiveness and appropriateness of the Multi-Plot Flipbook as a digital storytelling medium.

The expert evaluation was conducted through an assessment process in which the developed product was evaluated by a panel of experts using predetermined content and media evaluation sheets. This process aimed to determine the quality, feasibility, and suitability of the Multi-Plot Flipbook *"Singaraja Adventures"* in achieving the intended learning objectives. The evaluation instruments were adapted from Daryanes et al. (2023) and consisted of two assessment sheets: the Content Expert Evaluation Sheet and the Media Expert Evaluation Sheet.

The Content Expert Evaluation Sheet consisted of eight criteria covering the clarity of learning objectives, alignment with the syllabus, scope and depth of learning objectives, appropriateness of learning strategies, interactivity, contextuality and actuality, suitability of the application for achieving learning objectives, and ease of understanding. Meanwhile, the Media Expert Evaluation Sheet consisted of ten criteria covering interactive design, communicative media, creative design, media effectiveness, ease of management, sound clarity, supporting music, ease of use and operation, suitability of the media, and appropriateness of the selected application, software, or development tools.

Both evaluation sheets employed a five-point Likert scale, ranging from 1 to 5, with the following descriptions: (1) Very Poor, (2) Poor, (3) Average, (4) Good, and (5) Excellent. The evaluation results were presented numerically and analyzed quantitatively to determine the overall quality of the developed product. The following tables present the expert evaluation instruments.

Table 8 Content Expert Evaluation Sheet Adapted from Daryanes et al. (2023)

No	Name of Instrument	Criteria	Score					Total
			1	2	3	4	5	
1.	Content expert evaluation sheet	1. The learning objectives stated clearly						
		2. The learning objectives in accordance with SK/KD/Syllabus/RPS						
		3. The scope and depth of learning objectives						
		4. Using the appropriate learning strategies						
		5. Interactivity						
		6. Contextuality and actuality						
		7. Suitability of the app with the learning objectives						
		8. Easy to understand						

Table 9 Media Expert Evaluation Sheet Adapted from Daryanes et al. (2023)

No	Name of Instrument	Criteria	Score					Total
			1	2	3	4	5	
1.	Media Expert evaluation sheet	1. Using Interactive Design						
		2. Communicative media						
		3. Show the creative design						
		4. The effectiveness in using media						
		5. Can be managed easily						
		6. Sound Clarity						
		7. Carrying capacity music						
		7. Carrying capacity music						
		8. Easy to use and operate						
		9. Suitable for use						
		10. Appropriate selection of application or software or tool types for development						

The fourth research question was answered quantitatively using the data obtained from the Content Expert Evaluation Sheet and the Media Expert Evaluation Sheet. The researcher calculated the percentage of each evaluation result using the following formula adapted from Daryanes et al. (2023).

$$\text{Percentage} = \frac{\text{Actual Score} \times 100\%}{\text{SMI}}$$

Notes:

- P: Percentage of the evaluation result.
- Actual Score: The total score obtained from the experts' responses, calculated by multiplying each response by its corresponding weight and adding the results.
- SMI (Skor Maximal Ideal): The maximum possible score, calculated by multiplying the total number of questionnaire items by the highest score (5).

The resulting percentages were then interpreted using predetermined qualification criteria adapted from Daryanes et al. (2023).

These criteria were used to determine the quality and feasibility of the developed Multi-Plot Flipbook *"Singaraja Adventures"* and to identify whether further revisions were required. The qualification criteria are presented in the following table.

Level of Accomplishment (%)	Qualification	Information
85–100	Very Good	No revision needed
75–84	Good	No revision needed
64–74	Enough	Revision needed
55–63	Bad	Revision needed
0–54	Very Bad	Revision needed

In addition to expert assessments, student feedback questionnaires were analyzed to identify students' responses, perceptions, and experiences after using the developed flipbook. These responses provided information about the attractiveness, usability, accessibility, and contribution of the media to the learning process. Furthermore, students' learning achievement results were analyzed to examine their understanding of the English materials presented through the flipbook. Overall, the evaluation results from expert assessments, student feedback questionnaires, and learning achievement provided a basis for determining the suitability and educational value of the Multi-Plot Flipbook *"Singaraja Adventures"* as a digital storytelling medium for supporting English language learning among sixth-grade students at UNDIKSHA Laboratory Elementary School.

Finding

Analysis Stage

The analysis stage was conducted to identify the English learning needs of sixth-grade students and the challenges encountered during the teaching and learning process at UNDIKSHA Laboratory Elementary School. Data were collected through classroom observations, teacher and student needs questionnaires, and syllabus analysis. The observation focused on four main domains: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibilities. These observations provided information about classroom conditions, teaching practices, student participation, and the implementation of English language instruction.

The teacher and student needs questionnaires were analyzed using a weighted average score based on a five-point Likert scale. The questionnaire results indicated that interactive digital media, accessible technology, digital assessment, and interactive storytelling were highly needed, each receiving an average score of 4.3. Other identified needs included a user-friendly platform and digital book, both receiving 4.2, active student participation (4.1), audio, animation, and video features (4.0), and access to learning devices (3.9).

Furthermore, syllabus analysis was conducted to identify the expected learning outcomes, learning objectives, relevant topics, language elements, and instructional materials appropriate for sixth-grade students. The results of the analysis indicated the importance of developing contextualized English learning materials that were aligned with the school syllabus and students' learning needs. These findings became the foundation for designing the Multi-Plot Flipbook *"Singaraja Adventures,"* particularly in determining its learning content, interactive features, and multimedia components.

Design Stage

Based on the findings from the analysis stage, the researcher designed the multi-plot flipbook titled *"Singaraja Adventures"* as an interactive digital storytelling medium tailored specifically for sixth-grade students. This foundational design stage involved mapping out the comprehensive conceptual blueprint, which encompassed carefully outlining the intricate branching narrative pathways, structuring relevant pedagogical learning materials, planning interactive student activities, curating appropriate visual assets, and integrating multimedia features to optimize student engagement and comprehension.

Development Stage

During the development stage, the researcher successfully transformed this initial blueprint into a fully functional digital product utilizing advanced authoring and design tools, namely Canva and Flip PDF. Following rigorous evaluation and constructive feedback from qualified experts, the developed flipbook was further refined and enhanced to incorporate

seamless interactive navigation, robust branching storylines, engaging pop quizzes, and structured assessment tasks, ensuring the learning medium met high educational standards prior to classroom implementation.

Implementation Stage

The implementation stage was conducted in English lessons involving 52 sixth-grade students from classes 6A and 6B at UNDIKSHA Laboratory Elementary School, accompanied by one English teacher. During the implementation, the teacher introduced the flipbook, explained its navigation procedures, and guided students in exploring the different storylines and completing the learning activities.

Data were collected through Assignment Sheets, Teacher Feedback Forms, Student Feedback Forms, and Implementation Notes. These instruments were used to document students' learning achievement, teacher perceptions, student responses, classroom participation, and interactions during the learning process.

The Assignment Sheets were analyzed quantitatively using the percentage of learning achievement formula. Class 6A obtained a total score of 208 out of 260, equivalent to 80%, with a mean score of 8.00 and a median of 8. Meanwhile, class 6B obtained a total score of 182 out of 260, equivalent to 70%, with a mean score of 7.00 and a median of 7. These results provided an overview of students' achievement after participating in the learning activities using the flipbook.

Furthermore, the Student Feedback Forms were analyzed using the average score formula based on a five-point Likert scale. Class 6A obtained an average response score of 4.23, categorized as Highly Positive or Strongly Agree, while class 6B obtained an average score of 3.90, categorized as Positive or Agree. The combined average score was 4.07, indicating generally positive student responses toward the developed learning media.

The Teacher Feedback Forms were analyzed descriptively to obtain the teacher's observations, opinions, and evaluation of the flipbook, particularly regarding its content, appearance, usability, and contribution to English language learning. In addition, the Implementation Notes documented classroom activities, students' participation, interactions, engagement with the storylines, and the use of the flipbook throughout the teaching and learning process.

Overall, the implementation findings indicated that students responded positively to the flipbook and were able to participate in the learning activities through its interactive storylines, multimedia features, quizzes, and assessment tasks.

Evaluation Stage

The evaluation stage was conducted to determine the overall quality, feasibility, and suitability of the Multi-Plot Flipbook *"Singaraja Adventures"* as a digital storytelling medium for sixth-grade English language learning. The evaluation considered three main sources of evidence: expert assessments, student feedback questionnaires, and students' learning achievement results.

The content expert evaluations achieved percentages of 87.5% and 85%, both classified as Very Good. Meanwhile, the media expert evaluations achieved 84% and 90%, classified as Good and Very Good, respectively. These results indicated that the developed flipbook met the established quality criteria in terms of content and media design.

In terms of student responses, the combined average score of 4.07 indicated positive perceptions of the learning media. Students generally considered the flipbook enjoyable, understandable, and helpful in supporting their English learning activities.

Regarding learning achievement, class 6A obtained an average score of 8.00, while class 6B obtained an average score of 7.00. These results provided an overview of students' achievement after the classroom implementation of the developed product.

Based on the combined findings, the Multi-Plot Flipbook *"Singaraja Adventures"* demonstrated good to very good quality according to the expert evaluations and received positive responses from students. The learning achievement results also provided supporting information about students' performance after using the product. However, because the study did not employ a comparison group or pre-test

and post-test design, the results did not establish a causal relationship between the use of the flipbook and improvements in students' learning outcomes. Overall, the findings supported the suitability of the developed Multi-Plot Flipbook as an interactive digital storytelling medium for supporting English language learning among sixth-grade students at UNDIKSHA Laboratory Elementary School.

Discussion

Students' Learning Needs

The findings revealed that sixth-grade students at UNDIKSHA Laboratory Elementary School required interactive, technology-supported, and contextually relevant English learning media. Preliminary classroom observations identified limitations in the use of interactive learning resources and students' difficulties in understanding English grammatical structures, particularly present, past, and future tenses. The needs questionnaire results further supported these observations, showing high mean scores ranging from 3.9 to 4.3. Specifically, interactive digital media, accessible technology, digital assessment, and interactive storytelling received the highest average score of 4.3, indicating that these features were major requirements for the respondents. Other critical aspects included user-friendly platforms and digital books (4.2), active student participation (4.1), audio, animation, and video features (4.0), and access to learning devices (3.9).

These findings are consistent with Lena and Nikolov (2025), who examined young EFL learners' motivation and task engagement and highlighted the importance of interactive learning tasks in supporting students' engagement. Similarly, Korosidou and Griva (2024) demonstrated that digital storytelling could provide meaningful language learning experiences by combining narrative activities with interactive multimedia, encouraging task engagement, and supporting intercultural awareness.

Furthermore, the syllabus analysis identified core learning materials, including descriptive texts and the application of present, past, and future tenses. Integrating these grammatical elements into stories about familiar locations and cultural attractions in Singaraja provided opportunities for students to connect English learning with their surrounding environment. This contextual approach aligns with Aulia et al. (2024), whose literature review highlighted the contribution of digital storytelling to elementary students' literacy development. Therefore, the findings confirm that English learning media must incorporate technological features while providing meaningful content connected directly to students' real-world experiences and learning objectives.

Design and Development of the Multi-Plot Flipbook

The *"Singaraja Adventures"* flipbook was systematically developed using the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation stages (Sugiyono, 2023). The process operationalized the identified student needs and syllabus requirements by mapping out a comprehensive product blueprint, designing visual materials in Canva, converting them into an interactive digital format using Flip PDF, and refining the product based on rigorous expert validation.

The resulting flipbook integrated text, illustrations, voice-over audio, videos of local cultural attractions, smooth navigation features, and interactive quizzes. Its primary innovation—the multi-plot narrative structure allowed students to select different story paths and explore alternative outcomes. Unlike conventional linear digital books, this branching structure successfully fostered active participation, critical thinking, and decision-making. The integration of multimedia supported contextualized language learning, reinforcing the assertions of Korosidou and Griva (2024) and Aulia et al. (2024). Thus, the development process successfully translated students' identified learning needs into a highly interactive, functional, and culturally relevant learning resource.

Classroom Implementation and Student Engagement

The flipbook was successfully implemented across Classes 6A and 6B, involving 52 sixth-grade students, on August 11–12, 2026. The classroom teacher initiated the process by

introducing learning objectives, explaining navigation protocols, and guiding students through the branching stories and embedded quizzes. Students actively participated by selecting narrative paths, discussing alternative story outcomes, and completing tasks related to descriptive texts and Present, Past, and Future Tenses.

Classroom observations, implementation notes, and student feedback confirmed high levels of engagement and active participation. Students demonstrated distinct enthusiasm when navigating alternative storylines and interacting with multimedia elements. These positive interactions support Drajati et al. (2023) and Santosa et al. (2022), who emphasized the capacity of interactive digital learning tools to boost student engagement and intrinsic motivation.

Nevertheless, the implementation process underscored practical prerequisites, such as the necessity of stable internet connectivity and appropriate technological hardware. Furthermore, students required targeted teacher guidance when differentiating complex grammatical tenses. These observations indicate that interactive media must be complemented by thorough technical preparation and explicit pedagogical instruction. Overall, the implementation phase demonstrated the multi-plot flipbook's capability to cultivate a collaborative, immersive, and engaging English learning atmosphere.

Product Quality and Learning Outcomes

The overall quality, feasibility, and suitability of the product were comprehensively evaluated through expert judgments, student learning assessments, and perception questionnaires. The content expert validations yielded high scores of 87.5% and 85% (both classified as Very Good), while the media expert validations achieved 84% (Good) and 90% (Very Good). According to the qualification criteria adapted from Daryanes et al. (2023), scores above 75% categorise the product as good/very good and suitable for classroom use without major revisions. These expert assessments confirm that the flipbook met rigorous educational and media design criteria.

In terms of student achievement, Class 6A obtained an average score of 8.00 with an 80% mastery level, whereas Class 6B achieved an average score of 7.00 with a 70% mastery level (yielding a combined mastery level of 75%). Student responses captured via feedback questionnaires were equally encouraging, with Class 6A registering an average score of 4.23 (Highly Positive / Strongly Agree) and Class 6B recording 3.90 (Positive / Agree), producing a combined average score of 4.07.

These integrated findings indicate that *"Singaraja Adventures"* was well-received and possesses strong potential to support students' English language acquisition. Expert evaluations verified its structural and instructional integrity, while assessment scores and feedback questionnaire results provided empirical indicators of its classroom applicability. This is consistent with findings by Pratiwi et al. (2026), who reported that interactive digital storybooks and technology-supported feedback tools significantly improve EFL students' literacy, reading comprehension, and structural understanding. However, because the study did not utilize a control group or pre-test and post-test experimental design, these learning outcomes reflect general performance levels after product utilization rather than serving as definitive proof of direct causal effectiveness. Overall, the findings validate the multi-plot flipbook as a promising, high-quality alternative for interactive and contextualized English learning among elementary students.

CONCLUSION

Based on the findings and comprehensive evaluation of this study, several key conclusions can be drawn regarding the development and implementation of the *"Singaraja Adventures"* Multi-Plot Flipbook. First, the flipbook was successfully developed using the ADDIE model to bridge sixth-grade students' gaps and needs for interactive, contextualized, and technology-supported English learning resources, effectively integrating local cultural storytelling, multimedia components, descriptive texts, Present, Past, and Future Tenses, and interactive quizzes within a novel multi-plot structure. Second, classroom implementation across Classes 6A and 6B successfully stimulated active student participation, collaborative discussion, and high

engagement, garnering a strongly positive combined student response score of 4.07. Third, regarding product quality, expert evaluations established that the learning medium possesses Good to Very Good quality with validation scores ranging from 84% to 90%, while student learning evaluations showed encouraging mastery levels with an average score of 8.00 in Class 6A and 7.00 in Class 6B. Finally, while these findings confirm that the Singaraja Adventures flipbook is a suitable, practical, and engaging instructional medium for sixth-grade English learning, the absence of a pre-test/post-test framework and comparison group means that direct causal effects on learning outcomes cannot be fully established. Consequently, future research incorporating experimental designs with pre- and post-measurements alongside control groups is strongly recommended.

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