

CHAPTER I

INTRODUCTION

1.1 Research Background

Based on the results of PISA 2022 Indonesia was ranked 69 out of 80 countries, that means the Indonesian students have low literacy (OECD, 2023). This suggests that Indonesia's literacy initiatives have fallen short of expectations. Early childhood literacy encompasses more than just the mechanics of reading and writing; it also involves the ability to comprehend information, express ideas and emotions, and actively engage in reading-related activities (Kusna & Puspitasari, 2023). This holistic view of literacy emphasizes the importance of creating engaging and supportive learning environments. Considering the study's findings by Pratiwi et al. (2022) they found that the effective strategies for enhancing elementary reading skills include incorporating techniques like repeated reading and the use of digital storybook. By creating a rich and stimulating literacy environment, we can cultivate a lifelong love of reading in young learners.

The importance of fostering literacy skills in elementary school students cannot be overstated. A lack of literacy can lead to significant challenges, impacting students' ability to succeed academically and hindering their personal and professional development (Neysa, 2021). Literacy opens doors to numerous opportunities, including personal branding, skill development, and access to information and entertainment. Therefore, cultivating a strong foundation in

literacy is essential for empowering students to reach their full potential. Research indicates that engaging storytelling methods, such as using digital storybooks, can effectively stimulate early childhood literacy (Ani et al., 2024; Duta & Suratmi, 2024; Pratiwi et al., 2022). These interactive storytelling techniques can capture children's attention and enhance their comprehension and engagement with reading.

The development of strong literacy skills and a genuine love of reading hinges on two crucial factors: reading motivation and engagement. These elements are essential for fostering positive reading habits and promoting successful literacy development (Mae et al., 2024). Reading motivation is essential because reading is a fundamental skill that supports academic success and psychological well-being. However, many students struggle with reading, experiencing difficulties with comprehension and vocabulary development, underscoring the importance of effective interventions (Kheang et al., 2024). Creating an engaging and supportive learning environment is key to fostering positive reading experiences and increasing motivation. By addressing the challenges students face and nurturing their intrinsic motivation, educators can help them develop a lifelong appreciation for reading.

The digital era presents both challenges and opportunities to foster reading habits in elementary school students. Ease of access to digital media and the internet has had a significant impact on reading patterns, with online news consumption often driving students' reading interest (Nurfaizah et al., 2024). Students increasingly rely on the internet for academic and recreational activities, often preferring digital formats over traditional printed materials.

This shift in reading behaviour is further emphasized by the observation that students now access reading materials more often via smartphones than books or newspapers (Yusof, 2021). Despite concerns about the quality and relevance of online content, digital reading materials, such as e-books and online platforms, offer potential benefits for increasing reading behaviour engagement and literacy skills.

The evolving preferences of young learners necessitate a shift in the way we select and present reading materials. A study by Rosalina & Salam (2024) stated that children's expectations for engaging and interactive content are significantly shaped by their exposure to today's visually rich media landscape. Traditional reading materials, often characterized by static text and limited visual stimulation, may fail to engage them, leading to disinterest and reluctance to read (Wilhelm, 1995). To effectively introduce reading to young learners, sufficient resources and infrastructure are important. While, research by Novitasari & Nurfiqih (2021) shows many primary school students do not have access to commercially produced learning materials, a problem exacerbated by a lack of teacher training in effective English language teaching methodologies. This often results in ineffective and unengaging learning experiences.

Many studies have explored various reading materials to enhance students' literacy skills. Study by Demir-Lira et al. (2019) found that early parent-child book reading significantly predicts later vocabulary, reading comprehension, and motivation to read, highlighting its role in reducing SES-related language gaps. Research by Noble et al. (2019) found meta-analysis of 54 studies confirmed that shared reading has a small but positive effect on

children's language development. Study by Grøver et al. (2023) emphasized that parental influence through shared reading, rich verbal interaction, and literacy instruction is key to long-term reading success. Research by Kurniaman et al. (2020) explored how parents shape children's character in the digital era, noting that digital media can both support and hinder development. Meanwhile, Tabanera & Barrios (2024) developed instructional materials to improve sixth grade students' low reading comprehension, demonstrating the value of targeted, engaging content in literacy education. And study by Adnyani et al. (2021) found visual learning media are beneficial for young learners because they help clarify concepts and increase learning engagement.

The researcher discovered the following variables that contributed to students' lack of reading behaviour engagement based on the initial observations at SD Mutiara Singaraja. Preliminary observations indicate that several interconnected factors may affect students' reading behavioural engagement. First, the current reading materials available are limited in variety based on teacher and students' evidence. Second, students demonstrate low levels of self-initiated reading, suggesting a gap in independent motivation to explore literature outside of classroom assignments. Finally, environmental distractions, which further challenge students' ability to maintain focus and concentration during reading periods. This condition suggests that several factors, such as the teaching methods used in the classroom and the availability of reading resources suited to students' levels, could contribute to their limited behavioural engagement in reading activities.

However, there is a lack of SDGs reading material at SD Mutiara Singaraja. The Sustainable Development Goals (SDGs) were an attempt to transform our understanding of development and provide a more appropriate framework for addressing the significant challenges that our global society faces, including the quickening erosion of earth systems' ability to sustain life and the rise in inequality at all levels (Caballero, 2019). In the SDGs there are good values that can be integrated in the development of a digital storybook (Egyesület, 2018). The digital storybooks will use SDGs material because it will be the basis for students' readiness in facing future challenges and SDGs are also very much in line with 21st century education. Incorporating SDGs into digital storytelling can help students connect classroom learning with real-world issues, fostering critical thinking and problem-solving skills. This integration also encourages learners to become active global citizens who are aware of their role in contributing to a sustainable future.

Conducting need analysis is important to identify students reading behaviour engagement. Need analysis, according to Hutchinson and Waters (1987), learners' needs can be understood as the gap between their existing knowledge and the skills required for successful learning. In a similar vein, Nation & Macalister (2019) describe needs analysis in language education as a process of examining learners' current abilities, their shortcomings, and their aspirations. Within this framework, the needs of the students in this study can be categorized as follows: they struggle with limited vocabulary and reading fluency (lacks); they require engaging, visually supported, and interactive

reading resources (necessities); and they express interest in materials that explore relevant and meaningful themes such as sustainability (wants).

Carrying out a needs analysis plays a vital role in ensuring that the learning materials produced are meaningful, appropriate to learners' levels, and responsive to their real-life contexts. As highlighted by Umi Maisarah & Rahmadi Nirwanto (2024), this stage is fundamental in curriculum design and material development since it enables educators to map out students' abilities, interests, and objectives, and subsequently craft resources that are both effective and engaging. When this process is overlooked, there is a risk that the materials provided may be overly challenging, disconnected from learners' preferences, or insufficient in addressing their literacy difficulties. Thus, needs analysis functions as a foundation for creating instructional materials that simultaneously foster language growth and stimulate learners' motivation to participate actively in the reading process.

This emphasizes how important it is for teachers to develop a variety of reading materials that fit the reading levels and characteristics of their students, such as digital storybooks. A digital storybook is an interactive, multimedia version of a traditional storybook that combines text, images, audio, and animations to enhance the reading experience and engage learners in a digital format (Fibriasari et al., 2021; Harpiyani et al., 2022). In earlier years, numerous types of literature have stated that digital storybooks (also known as electronic storybooks, electronic talking books, or digital books) can be useful to children's early learning (Prasetya & Hirashima, 2019). Based on observations that have been carried out at SD Mutiara Singaraja, to overcome the problems found, such

as the lack of interesting reading books and the lack of innovation from teachers to increase student reading involvement, a digital story book SDGs based learning material is needed to be developed. The material that will be used in this digital storybook is SDGs (Sustainable Development Goals).

Based on the previous discussion on the challenges of low reading behaviour engagement among students, as well as findings from preliminary observations, the researchers intended to create a digital storybook focused on SDG-9. This initiative is specifically designed to increase English reading behaviour engagement among sixth grade students at SD Mutiara Singaraja. The development of this digital storybook is expected to address the current gap in available reading materials that are appropriate to the students' level of understanding. By integrating relevant themes from SDG-9, the digital storybook will not only provide engaging content but also raise awareness of sustainability issues. Ultimately, this study seeks to foster greater reading interest among elementary school students, thereby contributing to their overall literacy development and preparing them for future academic challenges.

1.2 Problem Identification

Many Initial observations at SD Mutiara Singaraja revealed several factors contributing to students' low interest in reading. The first factor is the limited variety of books and reading materials suited to students' abilities and interests. Many available texts are either too easy or too difficult, making them less challenging or engaging. Furthermore, these topics are often unrelated to

students' daily experiences, reducing their engagement with the content and their reading interest. Without diverse and engaging materials, students tend to be reluctant to read regularly.

The second factor is students' low awareness and motivation to read independently. Reading is often viewed solely as a school obligation, rather than as an enjoyable or rewarding activity. This mindset is reinforced by a lack of encouragement to read outside of class and a lack of consistent reading habits, both at home and at school. Furthermore, students rarely have the opportunity to set personal reading goals or feel a sense of accomplishment from reading, which limits their intrinsic motivation.

The final factor involves environmental distractions that hinder concentration while reading. Noisy classrooms, limited comfortable reading spaces, and a lack of dedicated quiet time for reading all pose significant challenges. This condition makes it difficult for students to understand the text and causes them to lose focus or get bored quickly, which ultimately reduces their involvement in reading activities.

1.3 Limitation of the Problem

1. Scope of The Study

This study is focused on the development and evaluation of a Digital Storybook specifically designed for elementary school students. The main objective is to create a learning tool that not only provides reading materials suited to students' needs but also incorporates engaging multimedia elements to enhance the reading behavioural engagement. But the product is web-based and

requires digital devices. Also, the topic only focuses on Sdg-9, specifically innovation.

2. Age Group

The research targets elementary school learners, specifically those in sixth grade, within the primary education level. This age group was selected because it represents an advanced stage in literacy development, where students are expected to read more complex texts, analyse content critically, and apply their understanding to broader contexts. At this stage, they require reading materials that not only maintain their interest but also challenge their thinking and encourage deeper comprehension. The Digital Storybook will therefore be tailored to match their higher reading abilities, cognitive maturity, and personal interests to maximize its educational impact.

3. Focus Areas

The study focuses on two main areas: enhancing students' reading behaviour engagement and promoting awareness of industry, innovation, and infrastructure. These focus areas are integrated into the Digital Storybook through stories and activities aligned with the United Nations Sustainable Development Goal (SDG) 9. By embedding themes of technological advancement, creative problem-solving, and sustainable infrastructure development into engaging narratives, the Digital Storybook not only boosts reading motivation but also nurtures critical thinking, innovation, and global awareness. This approach helps students connect literacy skills with real-world challenges and opportunities in a way that is both relevant and inspiring.

4. Geographical Location

The research was conducted at SD Mutiara Singaraja, a primary school located in Bali, Indonesia. This school is chosen due to its relevance to the study's objectives, as preliminary observations indicate challenges in reading behaviour engagement among students. The geographical setting also provides a meaningful cultural context for the design of the Digital Storybook, ensuring that the content resonates with the local environment and experiences of the students. This local focus help make the reading materials more relatable and impactful for the target audience.

1.4 Research Question

- 1) What are the needs of grade 6 students and teachers regarding materials that integrate SDG-9 to facilitate reading behavioural engagement?
- 2) How can a digital storybook integrating SDG-9 be designed and developed to support grade 6 students' reading behavioural engagement?
- 3) How is the quality of the developed SDG-9 digital storybook, as evaluated by experts, in terms of content, design, and relevance to literacy and sustainability education?
- 4) How is the quality of the developed SDG-9 digital storybook, as evaluated by teacher, in terms of students' reading behavioural engagement?

1.5 Research Objective

- 1) To identify the needs of grade 6 students and teachers' reading materials that integrate SDG-9 to facilitate reading behavioural engagement.

- 2) To design and develop a digital storybook integrating SDG-9 to support grade 6 students' reading behavioural engagement.
- 3) To evaluate the quality of the developed SDG-9 digital storybook, as assessed by experts, in terms of content, design, and relevance to literacy and sustainability education.
- 4) To evaluate the quality of the developed SDG-9 digital storybook, as assessed by teacher, in terms of students' reading behavioural engagement.

1.6 Specification of the Product

The product developed in this study is a web-based digital storybook entitled "Rolling, Rolling, Roll", designed as supplementary English reading material for sixth-grade students. The storybook integrates SDG-9, particularly the aspect of innovation, through a contextual narrative that promotes creativity and problem-solving in students' daily lives. It combines text, illustrations, and interactive features to facilitate students' reading behavioural engagement.

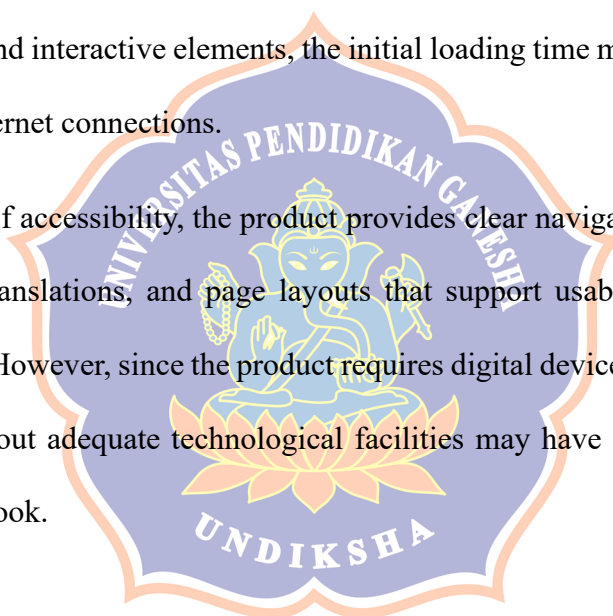
The digital storybook includes several interactive features, such as clickable navigation buttons, pop-up vocabulary translations, and activities such as "Spot the Differences" and "Words analysis" activity to support students' reading behavioural engagement and active participation. The content is presented using simple language, relatable characters, and familiar school-based settings appropriate for sixth-grade students.

From a technical perspective, the digital storybook is web-based and can be accessed through a URL using modern web browsers, including Google Chrome,

Microsoft Edge, Mozilla Firefox, and Safari. The product is compatible with desktop computers, laptops, tablets, and smartphones, allowing students to access the storybook across different digital devices.

The digital storybook requires a stable internet connection because it is hosted online through Netlify and is not designed for offline use. To ensure smooth navigation and multimedia playback, a moderate internet connection is recommended. The loading performance may vary depending on the user's internet speed and device specifications. Because the storybook contains illustrations, animations, and interactive elements, the initial loading time may be slightly longer on slower internet connections.

In terms of accessibility, the product provides clear navigation buttons, pop-up vocabulary translations, and page layouts that support usability across different screen sizes. However, since the product requires digital devices and internet access, students without adequate technological facilities may have limited access to the digital storybook.



1.7 Research Significance

This study has two significances, that are theoretical and practical significant:

1. Theoretical significance:

a. TEYL

This study contributes to the field of TEYL by demonstrating how the integration of digital storybooks facilitating young learners in

developing reading behaviour engagement. The study highlights how age-appropriate and contextually relevant materials can foster a positive reading culture in the English classroom for primary school students.

b. Reading Material

This study adds to the literature on reading materials for young learners by demonstrating the development of a thematic digital storybook based on real-world issues, specifically SDG-9. The study shows how contextual content can increase students' reading behavioural engagement.

c. Technology integration in ELT

This study provides insights into the use of digital media as an effective tool for English Language Teaching (ELT). It supports the idea that technology-enhanced materials can increase reading behavioural engagement particularly in primary education.

d. SDGs in Education

In line with Sustainable Development Goal 9 Industry, Innovation, and Infrastructure, this study integrates sustainability issues into reading content. This study contributes to the understanding of how global values can be introduced early on through meaningful and engaging reading activities in English.

2. Practical Significance:

a. For teacher

This study offers a practical model for teachers to integrate sustainability topics into English language learning through digital storytelling.

b. For students

Students benefit from interactive and relevant digital storybooks that match their levels and interests. The materials not only support reading behavioural engagement but also build their understanding of Innovation as part of SDG-9, which encourages meaningful learning beyond language skills.

c. For researcher

This study serves as a reference for future researchers interested in the relationship between English language education, digital material development, and SDG-based learning materials. This study opens up opportunities for further exploration in developing thematic digital content to enhance engagement and value-based learning in TEYL.

1.8 Definition of Key Terms

a) Conceptual Definition

1. Digital Storybook: An interactive digital reading media that combines text, illustrations, animations, audio, and other multimedia features to present a narrative in an engaging way for students (Fibriasari et al., 2021; Vackova et al., 2023.).

2. SDG-9 (Industry, Innovation, and Infrastructure): SDGs are a global UN framework with 17 goals to achieve by 2030, and SDG 9 focuses on industry, innovation, and infrastructure (Caballero, 2019; Kuhumab, 2018; Mangukiya & Sklarew, 2023).
3. Reading Behavioural Engagement: The observable behaviours shown by students during reading activities, particularly reflected through their attention, participation, concentration, and persistence while interacting with the digital storybook (Fredricks et al., 2004; Guthrie, 2004).

b) Operational Definition

1. Digital Storybook: A digital storybook is an interactive reading media that combines text, illustrations, animations, audio, and other multimedia features to present stories in an interesting and engaging way for students.
2. SDG-9 (Industry, Innovation, and Infrastructure): One of the United Nations' Sustainable Development Goals that focuses on promoting innovation, creativity, and sustainable development. In this study, SDG-9 is simplified into story-based themes related to simple innovations that are relevant to children's daily lives.
3. Reading Behavioural Engagement: Reading behavioural engagement refers to students' observable behaviours during reading activities, such as paying attention, participation, concentration, and persistence while using the digital storybook.