

Developing Electronic English Educational Cartoon (E-EduToon): A Culturally-Based Supplementary Material for Reading Instruction

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ABSTRACT

This research aimed to develop an interactive e-book integrating traditional games, such as Cublak-Cublak Suwung and Truth or Dare cards, with structured scaffolding to support English language learning. The researchers implemented scaffolding through step-by-step exercises that progressively guided students in understanding texts. While many studies have explored digital media in language learning, research on interactive e-books incorporating traditional games and scaffolding remains limited. Addressing this gap, this study employed a Research and Development (R&D) approach consisting of analysis, design, development, implementation, and evaluation. Using a mixed-methods design, quantitative data from 15 seventh-grade students was collected through Likert-scale questionnaires, and qualitative data was collected from interviews with an English teacher, observations, and student questionnaires. The e-book was validated by two experts in design and content, with validation scores of 4.33 from the media expert and 4.23 from the content expert, while students rated it 4.22, confirming its high validity. Additionally, student feedback indicated a strong interest in using the e-book for English learning, with an average score of 4.35. This innovative approach supports more engaging, culturally relevant English learning, making it a valuable resource for classrooms and supplementary learning, particularly among Indonesian learners.

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1. INTRODUCTION

In Indonesia, reading interest and literacy skills are relatively low, especially in complex texts, as shown by PISA, OECD, and UNESCO in 2022. This issue is linked to research findings [1], [2], which show that while many learners have reading and writing skills, they struggle with comprehension when faced with complex reading materials. This affects English literacy in Indonesia, as reading in English requires higher language skills

and cognitive abilities. Learners with limited reading interests and literacy skills might encounter difficulties comprehending English literature, particularly works with complex structures and unfamiliar vocabulary. Moreover, many learners feel more comfortable reading in Indonesian and Javanese and have limited exposure to suitable English reading materials, making it even harder to develop their reading proficiency. Based on research by several experts, enhancing overall literacy is crucial for advancing national literacy and significantly fosters English literacy [3], [4], [5], [6]. This improvement facilitates learners' access to global information and enhances their ability to compete internationally. These challenges highlight the broader literacy problem and demonstrate children's specific reading difficulties in their academic efforts, particularly in fluency, comprehension, and vocabulary development.

Research by Istiqomah et al. [7] and Oktavia et al. [8] indicates that young learners frequently encounter reading fluency and comprehension difficulties, primarily due to limited vocabulary knowledge. Reading problems include understanding long sentences, using good reading strategies, and paying attention. Psychological factors impact learners' comprehension of graded literature and academic texts, especially when reading in a second language, and the non-automatic transfer of reading strategies can worsen difficulties [9]. Learners frequently mispronounce words, which disrupts reading flow and impairs text comprehension. Moreover, reading anxiety affects learners' academic achievement by reducing focus and confidence, making it difficult for learners to engage with reading materials and perform well academically [3]. These issues are exacerbated by limited access to educational resources and the absence of interactive media. Additionally, classic literary works often use complex vocabulary, which can complicate comprehension for learners who may not find them easily aligned with their proficiency levels [10]. Furthermore, research by Baranggan et al. [11] explains that several factors contribute to these difficulties, including cognitive challenges, socio-emotional factors, socio-economic factors, inadequate teaching strategies, and insufficient parental involvement.

Reading difficulties are common among learners at the tutoring center. Observations indicate that ineffective English reading habits and lack of external support, including parental involvement and access to reading materials, negatively impact learners' reading skills. Students frequently encounter difficulties in developing consistent reading habits, leading to limited engagement with English texts. Their preference for Indonesian and Javanese as primary languages limits opportunities for engagement with English reading materials. Moreover, limited access to reading materials and a lack of parental involvement exacerbate these difficulties. The challenge of acquiring new English vocabulary and dependence on teacher support impacts learners' autonomy in enhancing their reading proficiency. Despite these challenges, learners at the tutoring center show significant intrinsic motivation to engage in reading. However, this motivation lacks sufficient assistance from external factors, especially regarding the availability of engaging and appropriate English reading materials. Lacking exposure to suitable and engaging texts hinders students' effective development of reading skills. This gap highlights the necessity for an intervention that aligns with students' linguistic backgrounds while promoting independent reading habits.

Nevertheless, there remains optimism for overcoming these obstacles. All stakeholders—including schools, communities, and families—create a good environment for literacy development when they work together [6]. Teachers are crucial in getting students interested in and motivated to read English literature, and they use various intelligence techniques or programs to help them with school and everyday issues [5].

A well-structured reading instruction program helps learners develop foundational skills and strategies, including phonics, phonemic awareness, vocabulary building, fluency, and comprehension, through a combination of direct teaching, guided practice, and individual reading opportunities [12]. Reading instruction includes the methods, approaches, and strategies used to teach people how to read well. It includes a variety of instructional approaches that aim to improve reading abilities, comprehension, and fluency [13]. This approach aligns with research by Yapp et al. [9], which demonstrates that integrating reading strategies within instruction promotes strategic reading behavior and significantly aids in developing learners' academic reading skills. Furthermore, support includes interactive, technology-based materials, regular progress monitoring, and exams to measure student development. As highlighted by Duke et al. [12], this method enhances reading accessibility and engagement by utilizing digital texts, multimedia resources, and interactive tools, fostering collaborative learning and social interaction. This approach also aligns with the importance of selecting appropriate materials and incorporating diverse resources to support student learning.

Furthermore, supplementary materials improve the reading teaching program by providing additional resources that satisfy varied learning requirements and increase student engagement [14]. In addition, according to the findings of Seli [15], selecting and offering reading materials that are appropriate for learners' comprehension levels and interests is the responsibility of teachers. Moreover, complementing primary course materials and providing diverse, interactive resources such as flashcards, videos, and digital tools can enhance teaching and learning [16]. According to the research of Fitriyah [17], the transition to digital texts, such as blogs, journals, and social media, has become increasingly popular over traditional print materials. To address these challenges, innovative approaches such as digital reading tools are gaining attention for their potential to enhance literacy skills.

An e-book is a digital publication that combines audio and visual components, offering interactive content like text, audio readings, music, drawings, and animations on digital devices [18], [19]. It offers great convenience, allowing readers to carry multiple books in one device, making it ideal for traveling or studying. Unlike traditional books, e-books can be downloaded instantly, saving time and effort in purchasing while providing a seamless reading experience. It aligns with the research of Hidayat and Setiawan [20] that e-books and online resources enhance learners' academic performance and reading comprehension as they integrate technology into education through primary or supplementary materials. With the introduction of e-books, the popularity of digital devices shapes children's access to and engagement with reading materials, creating new habits and opportunities for literacy advancement among young learners. To enhance engagement and comprehension, e-books incorporate various multimedia elements. For instance, cartoons,

comics, and other visual storytelling techniques help simplify complex concepts and make reading more enjoyable for young learners.

Previous researchers have highlighted the beneficial role of cartoons in various educational settings, serving as significant tools for capturing children's attention and interest while facilitating contextual and collaborative learning opportunities (Wyk and Micheal, 2011, as cited in Martzoukou [21]). Cartoons are humorous or illustrative images or animations that often convey messages or comedic ideas and are used in print, animated, and educational contexts to capture attention and make learning enjoyable [22]. In addition, the use of cartoon narratives is a powerful pedagogical tool for engaging young learners, promoting critical thinking, and encouraging conversation, effectively teaching fundamental concepts and behaviors within a sociocultural context [21], [23], [24], [25]. Furthermore, the concept cartoon teaching strategy can enhance creativity and innovation while boosting learners' interest in understanding concepts [26]. Cartoons create an immersive experience that stimulates both visual and linguistic processing, making it easier for learners to comprehend and remember new vocabulary and concepts. The research by Salman [27] finds that exposure to cartoons enhances language learners' oral responses, motivation, communication skills, non-verbal skills, and cross-cultural communication. Incorporating cultural narratives into reading materials can improve engagement and understanding.

Familiar themes and cultural references help learners connect new words and concepts to prior knowledge, making learning more relevant. Research by Ratminingsih and Budasi [28] shows that local culture-based content reduces cognitive pressure and increases engagement. Reading skills also improve when materials relate to learners' real-life contexts [15]. Research by Seli et al. [15] found that culturally integrated reading materials were highly effective, with all tested students meeting the Minimum Competency Criteria (KKM). Similarly, Azizah, Inderawati, and Vianty reported that 73.91% of students achieved the required fluency score using culturally relevant texts, demonstrating their role in enhancing comprehension and vocabulary acquisition.

Additionally, local cultural stories foster respect for traditions and encourage reading [28], [29], [30]. This cultural relevance makes learning more meaningful while supporting both literacy and cultural appreciation. Some studies have investigated appropriate tools for intermediate learners, especially in English learning programs, to guide and engage their motivation.

Numerous research studies have examined the potential of technology-enhanced learning, particularly in language teaching. Research by López-Escribano et al. [19] indicates that e-book reading enhances phonological awareness, vocabulary, and literacy skills but requires guidance for effective implementation and adaptation to distance learning, especially during health crises, despite its improved features. However, while these benefits are significant, e-books often lack cultural adaptation and interactivity—an area that E-EduToon addresses by incorporating Javanese cultural elements and interactive features. Similarly, Singer [22] explores how cartoons support English Language Learners (ELLs) by offering an engaging design, reinforcing vocabulary, and introducing unexpected cultural references. By providing relatable stories, cartoons help increase motivation, improve vocabulary retention, enhance listening comprehension, and reduce language anxiety.

However, their potential within a structured reading framework remains unexplored, which E-EduToon integrates through interactive storytelling and gamified activities.

Furthermore, Yapp et al. [9] highlight that reading strategy instruction increases average reading comprehension scores, demonstrating its positive impact across diverse educational backgrounds, although individual gains vary. Despite this, existing studies primarily focus on comprehension techniques rather than embedding them in an interactive, culturally relevant format. Likewise, Azizah et al. [30] examine the development of English reading materials reflecting Bangka's local culture for vocational school students in tourism and travel programs, identifying gaps in local resources and analyzing student needs. However, while cultural relevance is emphasized, gamification and interactive scaffolding do not incorporate key aspects that E-EduToon integrates. This study bridges these gaps by combining scaffolding, gamification, and cultural context by developing a culturally integrated, interactive e-book that strengthens reading comprehension and sustains students' intrinsic motivation.

Building on these findings, research on supplementary reading resources that incorporate local culture into English instruction, particularly in the form of interactive e-books, remains limited. Tutoring facilities frequently overlook culturally relevant and engaging learning materials, emphasizing this gap. To address this issue, this study describes the development of E-EduToon, an interactive e-book that integrates Javanese local culture as supplementary content to support students' reading skill development. Designed to provide engaging, contextually relevant, and need-based reading materials, E-EduToon considers students' needs, wants, and lacks, ensuring accessibility and motivation in learning. Rather than measuring effectiveness, this study evaluates the appropriateness of E-EduToon in enhancing reading competency, particularly in comprehension, fluency, and vocabulary acquisition. The e-book includes interactive features such as audio narration for pronunciation practice, flashcards with verbs and their pronunciation, an engaging game inspired by the Javanese song *Cublak-Cublak Suwung*, and truth-or-dare cards to foster speaking practice while reinforcing reading comprehension. E-EduToon is an innovative tool that supports students' English reading skills and nurtures their intrinsic motivation for reading by integrating local cultural elements and gamified learning.

2. METHOD

This research used the Research and Development (R&D) method. Based on Sugiyono [31], it produced a product that was assessed for feasibility and efficacy through expert validation, student testing, and subsequent revisions to achieve an optimal product. The expert validation examined four key aspects to ensure quality, specifically focusing on content, presentation, language, and design. This research employed the ADDIE model to develop the learning material widely used for instructional design systematically. ADDIE provides a structured framework that guides the creation of educational products and other learning resources, making it a suitable choice for this study [32]. Unlike purely exploratory research, this study investigates a phenomenon and develops a new product, reinforcing the need for a systematic approach such as ADDIE. This development model comprises five

stages: Analysis, Design, Development, Implementation, and Evaluation. The ADDIE Development Model is defined as follows:

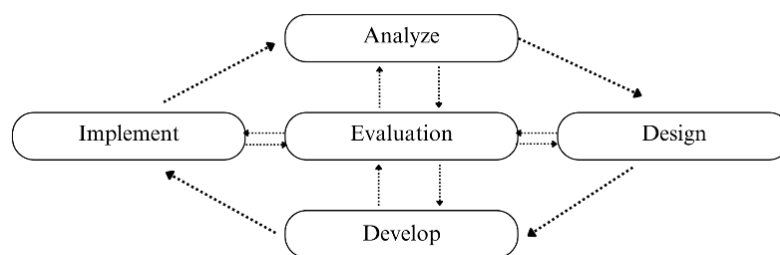


Figure 1. Design and Development Stages in the ADDIE Model

The sample for this study consisted of 15 seventh-grade junior high school students enrolled in a tutoring facility and one English teacher. The sample selection was determined by the entire population of grade 7 students at the institution to guarantee participation from all students. Ensuring that all learners participated. The teacher, who also owned the tutoring center, was involved due to their expertise and direct role in teaching the students. While the sample size is relatively small, it aligns with the study context and provides valuable insights. However, this limitation is acknowledged, as findings may not be fully generalizable to a broader population.

Questionnaires and interviews were developed as data-gathering methods to obtain in-depth information. The researchers conducted in-depth interview procedures to gather primary data. The English teacher was interviewed to gain insights into strategies used to enhance learners' reading abilities, encompassing comprehension, fluency, and vocabulary expansion. The teacher's explanation of the tactics implemented in the classroom to enhance these aspects of reading was essential. The researchers' questionnaire, which included thirty questions about the need to produce an e-book for supplementary material, was then administered and sent to approximately 15 grade 7 junior high school learners. It covered three major topics: the learners' profile, demography, needs, wants, and obstacles in reading English material.

Ethical considerations were considered at the beginning of the research. The research received approval from the tutoring center's owner, who also served as the primary instructor. Additionally, all participants' data were protected to ensure confidentiality. The researchers categorized the data into two classifications: qualitative and quantitative data. The quantitative data were analyzed using averages to measure students' responses to the developed material. The mean scores from expert evaluations, teacher feedback, and student questionnaires were calculated to assess the suitability of the e-book.

On the other hand, the qualitative data relied on non-numerical data, such as open-ended questionnaire responses and teacher feedback, to gain an in-depth understanding of students' experiences and needs. These data were analyzed thematically to identify patterns related to students' reading challenges and the effectiveness of the developed material. Ultimately, the researchers reviewed and contrasted the qualitative and quantitative data, leading to their conclusion.

3. RESULTS AND DISCUSSION

This chapter outlines the research findings collected from the needs analysis, material design, development, product implementation, and final evaluation. The effectiveness and relevance of the developed materials were assessed at each stage of the process. The sections that follow offer a comprehensive analysis of these findings:

3.1 Analysis

This section discussed the findings related to the needs analysis for creating an electronic English educational cartoon (E-EduToon) as an auxiliary interactive resource for reading instruction. The findings were derived from interviews and surveys that examined learners' habits and requirements. Both quantitative and qualitative data were analyzed and assessed. The primary findings encompassed four essential elements: the learners' English profiles and demographics, their needs, desires, and deficiencies. These observations provided the basis for creating engaging and successful interactive materials aligned with the objectives of reading education. The researchers investigated learners' profiles, demographics, reading habits, preferences, needs, desires, and deficiencies. The subsequent table provided data on learners, encompassing their identities, demographic information, reading habits, frequency and format of reading, interests and preferences, motivation to read, and their emotions and attitudes towards reading.

Learners' reading frequency in English remains comparatively low for several reasons. The majority of learners preferred reading in Indonesian (93.8%), whereas the use of English for reading remained significantly restricted. This was probably attributable to lacking vocabulary comprehension and limited exposure to English texts in everyday contexts. Furthermore, the reading habits of the learners had not yet developed consistently, as indicated by only 12.5% maintaining a daily reading schedule, while 25% read based on their mood. The duration of reading was specifically brief, as over half of the learners (53.3%) reported reading for less than one hour per week, and nearly half (46.7%) indicated they read English texts for under five minutes in a single session.

Furthermore, limited access to various reading materials established another obstacle to developing reading habits. Most learners relied totally on textbooks for their English reading materials (60%), resulting in limited options. In comparison, 80% of learners were interested in adventure stories, and 20% preferred narratives featuring historical or cultural themes. This indicated that while the majority favored narratives rich in action and challenges, a specific group of learners was interested in stories covering cultural and historical values. Various reading materials, including adventure stories with cultural elements, could enhance reading interest and introduce learners to a broader cultural wealth. Moreover, offering personalized reading recommendations aligned with students' interests and proficiency levels could further motivate engagement with English texts.

External factors, including support from teachers and parents, were limited; most learners (73.3%) indicated that their motivation to read originated from within themselves rather than from external encouragement. The low reading habit may have led to difficulties for learners in comprehending English texts in both academic and everyday contexts. Limited reading ability may lead to rapid feelings of frustration or weakness when

encountering longer and more complex texts. If this habit had persisted, it could have posed challenges to developing English literacy skills, potentially impacting academic performance, particularly in subjects necessitating comprehension of English texts, such as science and social studies. The deficiency in reading skills may have restricted their capacity to access global information, given that numerous sources of knowledge and literature are available in English. This highlights the crucial role of teachers and parents in fostering structured reading habits. Teachers can integrate structured reading sessions into the curriculum, incorporate guided reading activities like role-playing and discussions, and provide diverse reading materials to make English texts more accessible and engaging. Meanwhile, parental involvement, such as setting daily reading routines, reading together with children, and supervising digital reading resources, could reinforce reading habits at home. Consequently, effective strategies are required to enhance learners' reading habits, including offering more engaging reading materials, augmenting environmental support, or adopting more interactive learning methods.

The survey results reveal that students show inconsistent reading habits, often engaging in reading based on personal preference rather than keeping to a structured schedule. The irregular pattern may arise from lacking engaging reading materials, limited external support, and challenges in comprehending English texts. E-EduToon addresses this issue by incorporating interactive storytelling and gamified activities, which encourage students to engage with reading in a structured and enjoyable manner. Incorporating cultural elements, vocabulary exercises, and checkpoint questions transforms reading from an easy task into an engaging experience. Incorporating traditional games like Cublak-Cublak Suwung facilitates a collaborative and interactive learning environment that may develop consistent reading habits. Additionally, integrating scaffolded exercises and digital accessibility ensures learners can engage with materials at their own pace while benefiting from interactive features such as embedded media and adjustable text formats. E-EduToon enhances reading engagement by aligning digital learning strategies with culturally relevant content, which improves the possibility of students developing independent reading practices over time.

Based on Table 1 below, English reading habits were limited by an insufficient vocabulary, a lack of captivating material, and environmental support. Such factors led to irregular habits and motivation from within. The research by Alsaeedi et al. [33] emphasized the importance of early childhood reading habits for lifelong engagement, academic proficiency, and positive attitudes toward reading, highlighting the need for proactive strategies. Therefore, implementing structured reading programs, increasing access to diverse reading materials, and fostering a supportive reading environment could help learners develop stronger English reading habits. Without proper intervention, these challenges may persist and hinder learners' academic progress, limiting their ability to engage with global knowledge and opportunities. This situation highlights the crucial role of teachers and parents in providing continuous encouragement and guidance to cultivate consistent reading habits from an early age.

Table 1. Student Profiles and Demographics

Variable	Category	Frequency	Percentage
Grade	7 th	15	100%
Age	12 years old	2	12.5%
	13 years old	12	75.1%
	14 years old	1	6.3%
Reading Language	Indonesian	14	93.8%
	Javanese	1	6.3%
Special time to read at home	Every day	2	12.5%
	Several times a week	7	50%
	No schedule	2	12.5%
	Depends on mood	4	25%
Reading time in a week	Less than 1 hour	8	53.3%
	1-2 hours	6	40%
	3-4 hours	1	6.7%
Reading place	At school	5	33%
	At home	4	26.7%
	In public places	2	13.3%
	All of the above places	4	26.7%
Online Reading Frequency	Often	6	40%
	Sometimes	7	46.7%
	Rarely	2	13.3%
English book collection	Quite a lot	1	6.7%
	Some, but few	5	33.3%
	Only textbooks	9	60%
Type of English Text	Textbook	5	33.3%
	Social media or online articles	5	33.3%
	Novels or short stories	5	33.3%
Interesting topic	Adventure	12	80%
	History or culture	3	20%
Motivation to read	Often	8	53.3%
	Sometimes	2	13.3%
	Depend on topic	5	33.3%
Reading motivators	Teachers/parent	3	6.7%
	Yourself	11	73.3%
	No one	1	20%
Reason for Reading English	Schoolwork	2	13.3%
	For entertainment	5	33.3%
	To broaden your horizons	4	26.7%
	All of the above reasons	4	26.7%
Digital Reading Preference	Really like	3	20%
	Like	5	33.3%
	Not really	5	33.3%
Illustration preference.	Prefer physical books	2	13.3%
	Text with illustrations	11	73.3%
	Text only	1	6.7%
Reading duration for an English text	No problem	3	20%
	Less than 5 minutes	7	46.7%
	5-10 minutes	4	26.7%
	10-20 minutes	1	6.7%
Feeling about reading	More than 20 minutes	3	20%
	Very enjoyable	6	40%
	Fun	6	40%
	Neutral	3	20%

The second portion presented the findings regarding the most challenging English reading components for intermediate Junior high school learners. Figure 2 identifies four primary challenges in reading English: comprehension of new vocabulary, identification of the core idea, answering text-based questions, and evaluation of all possibilities. The data revealed that approximately 87% of learners faced challenges in understanding unfamiliar words, whereas 7% had difficulties in identifying the main idea or encountered issues across all areas. Interestingly, 0% of learners indicated difficulty in responding to questions based on the text, suggesting that this component was not seen as challenging. Based on Figure 2, the main problem of English reading was lacking vocabulary, and it is related to research by Istiqomah et al. [7], Singer [22], and Kwangmuang [24]. This finding suggests that vocabulary mastery is a significant barrier to reading comprehension. Limited vocabulary knowledge can lead to difficulty grasping the meaning of sentences, reducing students' ability to infer context and understand the overall text structure.

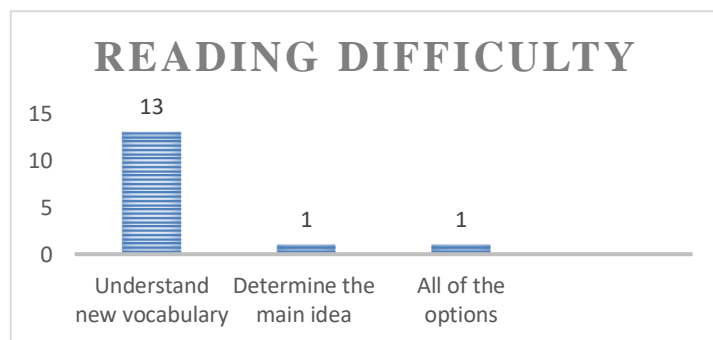


Figure 2. Student's Reading Difficulty

Given these challenges, an instructional approach that emphasizes gradual vocabulary exposure, contextual learning, and interactive practice is necessary. The development of E-EduToon addresses this issue by integrating scaffolded vocabulary exercises, where students engage with new words through interactive flashcards, matching activities, and contextual usage within stories. Additionally, the incorporation of audio narration in E-EduToon provides pronunciation support, helping learners recognize and retain new words more effectively. By integrating culturally relevant content, such as the Javanese folktale-inspired story and traditional games like Cublak-Cublak Suwung, students encounter vocabulary in familiar contexts, making it easier to understand and remember. This approach not only supports language acquisition but also enhances motivation and engagement, as students can relate the content to their prior knowledge. The findings highlight the importance of integrating digital tools that provide interactive vocabulary-building strategies to bridge the gap between students' existing language skills and their reading comprehension needs.

Figure 3 showed that approximately 73% of learners exhibited proficiency in understanding simple English texts, although they required some assistance. Approximately 27% demonstrated some level of comprehension but required significant assistance from educators or their classmates. Interestingly, no learners indicated they comprehended the texts well without assistance, and none reported difficulty understanding the material. This

indicated that, while most learners demonstrated basic comprehension, targeted support was necessary to improve their overall understanding. The chart indicates that the student's comprehension level is intermediate.

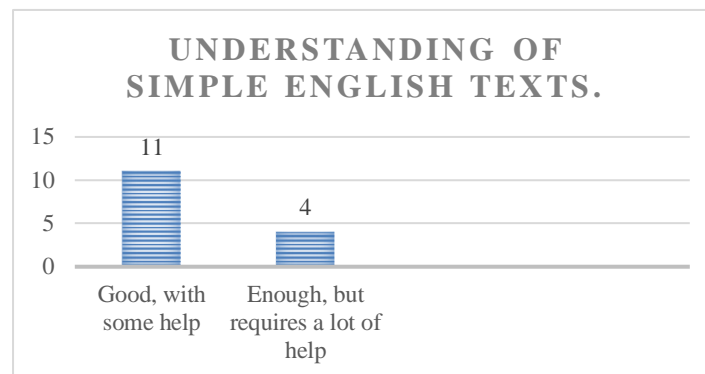


Figure 3. Understanding of Simple English Text

The issues were connected with Figure 2, as the learners exhibited a lack of vocabulary, leading to confusion regarding certain sentences. The findings presented in Figure 3 indicate that nearly all learners were comfortable with simple text; however, 27% required significant assistance from peers or instructors. The research by Nahatame et al. [35] showed significant differences in reading proficiency among L2 readers, which influenced their reading and information processing in texts. As a result, learners with limited vocabulary faced greater challenges in understanding the overall meaning of the text. Many struggled to recognize key terms, leading to frequent misunderstandings and slower reading progress. Without sufficient vocabulary knowledge, they often misinterpreted sentences or skipped difficult words altogether. To address this issue, Teacher guidance is crucial for learners' reading skills development. Based on research by Nahatame et al. [35], and Isral [36], It involves timely feedback, appropriate texts, interactive teaching methods, cognitive skills, cultural awareness, motivation, structured vocabulary exercises, clear material delivery, and continuous progress monitoring.

Figure 4 shows learners' confidence levels when dealing with lengthy reading materials. Most respondents (80%) felt secure, with modest confidence in processing lengthy texts. However, 20% indicated anxiety, implying hesitation or struggle. No learners demonstrated unusually high levels of confidence or serious worry. Most learners felt secure but not overconfident, indicating they had been exposed to large texts but lacked the abilities or methods to handle them effectively. The 20% who showed worry may have had difficulty with reading comprehension, vocabulary restrictions, or complex structures. The type of reading materials used may have also influenced confidence levels. The other research highlights the importance of systematic reading teaching in enhancing learners' confidence in dealing with longer materials [34], [35], [37]. It suggests that an e-book with cultural components should include scaffolded reading assignments, integrated comprehension tactics, and culturally relevant stories to increase engagement and motivation. By addressing these concerns, learners improved their reading skills, gained confidence in large reading, and transitioned to independent reading with increased enthusiasm.

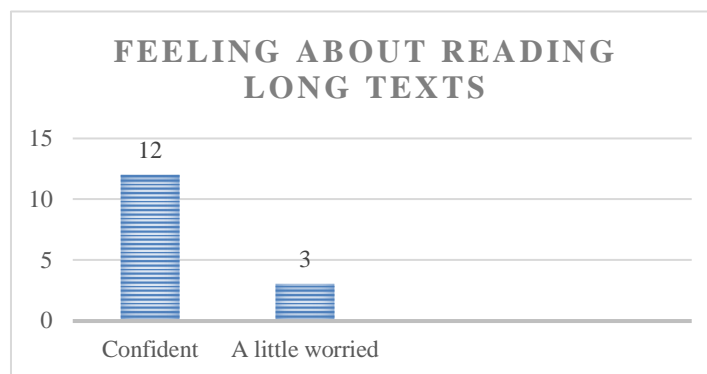


Figure 4. Student's Feelings About Reading Long Text

Figure 5 showed that 60% of the learners, represented by the blue part of the pie chart, frequently needed assistance during their learning process. In contrast, 40% of the learners, highlighted in the orange segment, sometimes needed assistance. Significantly, no learners chose the options “always” or “never,” indicating that while the majority frequently required assistance, a substantial percentage could complete tasks with little help.

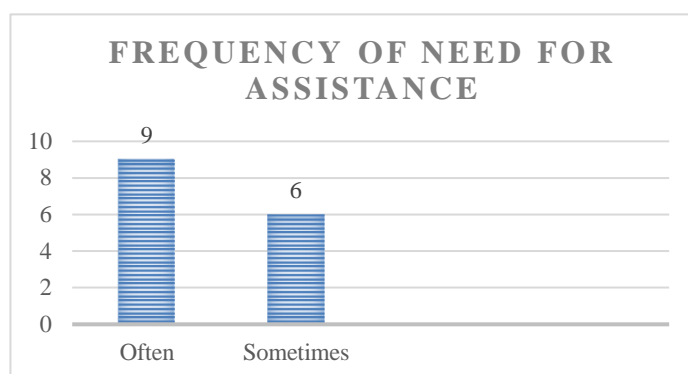


Figure 5. Frequency of Need for Assistance

The high percentage of learners who frequently needed assistance might have resulted from several factors. First, many learners might have struggled with reading comprehension, especially when facing unfamiliar vocabulary or complex sentence structures. Second, the lack of structured reading strategies could have made it difficult for learners to navigate long texts independently, and it aligned with research by Yapp et al. [9], Ratminingsih and Budasi [28], and Swandi et al. [38]. Additionally, the materials used in their learning environment might not have been engaging or aligned with their cultural context, leading to reduced motivation and a higher reliance on guidance. As a result, teachers played a crucial role in assisting students by explaining difficult words, clarifying sentence structures, and providing step-by-step reading guidance. Many learners might have struggled to build confidence in their reading abilities without this support.

These findings reinforced the need for developing the E-Edutoon Reading Instruction, as the e-book aimed to provide scaffolded reading exercises and culturally relevant stories. By integrating guided activities and comprehension strategies, the material could have helped learners transition from frequently requiring assistance to becoming more independent readers. Furthermore, by incorporating engaging cultural elements, the e-book

sought to enhance motivation, making reading more enjoyable and accessible, ultimately reducing the learners' dependency on assistance.

The high preference for interactive games and visual content might have resulted from learners' need for engaging and immersive learning experiences. Traditional school textbooks were static and text-heavy, which could have made learning boring and difficult. Interactive games provide an element of fun while reinforcing learning, making it easier for learners to stay motivated. Similarly, films and animations offered visual storytelling, which helped learners understand complex concepts more effectively [21]. The researchers developed the E-Edutoon Reading Instruction with these findings in mind. Since learners preferred interactive and visual learning, the e-book was designed to incorporate engaging elements such as scaffolded exercises, illustrations, and interactive activities. By combining cultural stories with digital learning strategies, the material aimed to enhance student engagement, improve reading comprehension, and progressively build confidence in handling longer texts [22], [34], [38]. The results further reinforced the need for innovative and culturally relevant learning resources that addressed learners' preferences and learning styles.

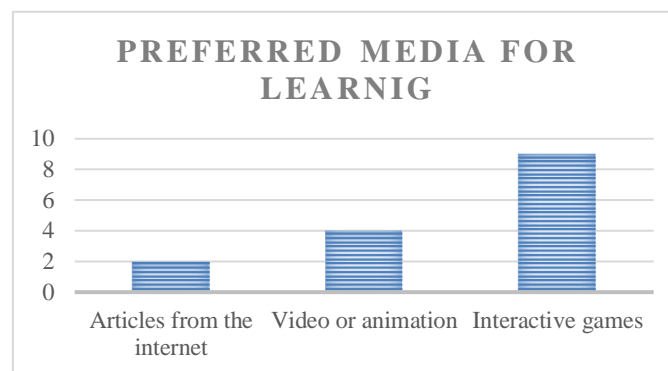


Figure 6. Preferred Media for Learning

The results from Figure 7 indicate that 40% of students preferred digital text, reflecting its popularity and accessibility, while 33% favored printed materials, showing that traditional reading modes remain relevant. Additionally, 27% of respondents stated that their preference depended on the situation, suggesting a flexible approach to text selection. Notably, no respondents selected “No preference,” indicating that all participants preferred a specific reading format. Students who preferred digital text cited ease of access, interactive features, and multimedia support as key advantages. Digital texts allow learners to access materials anytime and anywhere, with features such as hyperlinks, embedded media, and adjustable font sizes that enhance readability.

Additionally, digital resources reduced costs and supported eco-friendly learning (19). Meanwhile, students who favored printed materials appreciated the tactile reading experience, which helped them focus and comprehend texts better (19). Printed materials eliminated distractions from notifications and other digital interruptions, making concentrating easier.

Findings from the student survey further support these preferences. Many students found E-EduToon easy to access and navigate, reinforcing the effectiveness of digital

learning tools. The interactive features, such as vocabulary exercises and digital storytelling, helped students retain information better. Additionally, students felt more motivated to complete all sections of E-EduToon, suggesting that culturally relevant, game-based learning enhances engagement and comprehension. These insights align with students' preference for digital texts and acknowledge the need for flexible learning formats.

These findings supported the development of the E-EduToon Reading Instruction as a digital e-book. Since many learners enjoyed digital texts, the e-book provided an engaging and interactive reading experience. It included scaffolded exercises and culturally relevant content to enhance reading comprehension. Additionally, understanding that some learners still valued printed materials, the e-book offered options for offline access or printable versions to accommodate diverse learning preferences.

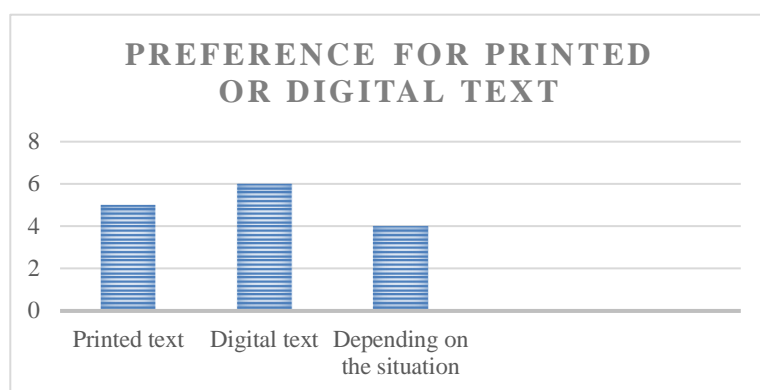


Figure 7. Preference for Printed or Digital Text

According to Figure 8, 40% of respondents found visuals in text, such as diagrams, photographs, and illustrations, extremely useful. Another 40% stated that visuals were helpful, highlighting their importance in improving comprehension. Meanwhile, 20% of respondents felt that photographs were only somewhat beneficial, suggesting that visuals had a lesser impact on certain individuals. Notably, no respondents selected the option "Not helpful at all," demonstrating the overall effectiveness of images in enhancing text comprehension.

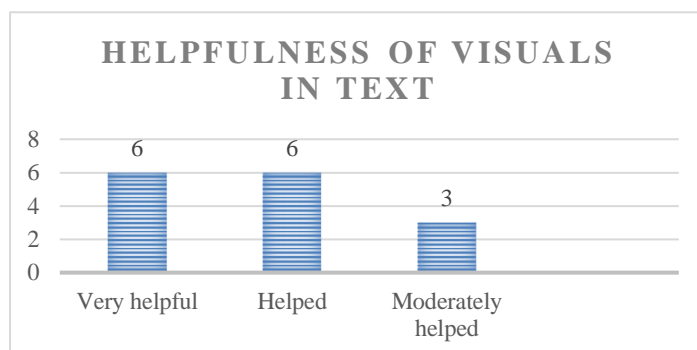


Figure 8. Helpfulness of Visuals in Text

A significant preference for pictures in text was likely due to their ability to clarify difficult material and improve understanding. Diagrams, pictures, and images might have helped learners contextualize unfamiliar words and grasp abstract concepts more easily. Visual aids also break down large portions of text, reducing cognitive load and making reading more engaging. These findings aligned with previous research [18], indicating that multimodal learning improved comprehension, particularly for visual learners.

These insights guided the researchers in developing the E-EduToon Reading Instruction. Since visuals played a crucial role in comprehension, the e-book incorporated appealing illustrations, contextual images, and scaffolded visual aids. These elements aim to help learners understand the narrative, reinforce vocabulary acquisition, and maintain motivation. The material utilized images strategically to bridge comprehension gaps and enhance the overall reading experience.

Figure 9 illustrates the percentage of apps learners used to support their English reading. Duolingo accounted for 53.3%, while Google Translate made up 46.7%. This indicated that Duolingo was slightly more popular among learners seeking reading assistance than Google Translate. Both apps played a significant role in English reading education, as reflected in the distributed results. Furthermore, no respondents selected "Grammarly" or "Never used," emphasizing the strong preference for Duolingo and Google Translate over other options.

Learners preferred Duolingo and Google Translate because both apps provided accessible and practical tools for improving English reading skills. Duolingo offered structured learning with gamified exercises that helped users build vocabulary and comprehension progressively. Meanwhile, Google Translate allows learners to quickly translate unfamiliar words or phrases, making it a useful tool for overcoming vocabulary barriers in reading.

The slightly higher preference for Duolingo provided a friendly learning platform that encouraged user engagement through gamification elements such as points, streaks, and progress tracking, which may have indirectly facilitated regular practice, including reading [39]. Duolingo's step-by-step approach might have encouraged learners to practice reading more consistently, whereas Google Translate served as a quick reference rather than a primary learning tool. The absence of responses for Grammarly indicated that learners prioritized vocabulary and translation assistance over grammar-focused support when dealing with reading materials.

These findings supported the development of the E-Edutoon Reading Instruction by highlighting the need for structured, engaging, and interactive reading materials. Since learners preferred media that guided their learning and offered immediate assistance, the e-book incorporated scaffolded exercises, vocabulary support, and interactive elements to enhance comprehension. By integrating these features, the E-Edutoon aimed to help learners transition from relying on external tools to developing independent reading strategies.

Figure 10 below demonstrates that learners prioritized practical reasons for learning English reading skills. Thirty-three percent of respondents desired to improve their academic performance, while another 33% wanted to plan for the future. Meanwhile, 27% emphasized knowledge gain. However, only 7% decided to read for enjoyment, especially stories in

English. These findings revealed that most learners favored English reading for academic and future benefits over enjoyment it supported the findings of research by Akmal et al. [3]. Learners valued academic performance and future preparation because they understood the significance of English reading for their education and professional aspirations. They required outstanding reading abilities to understand texts, complete homework, and perform well on exams.

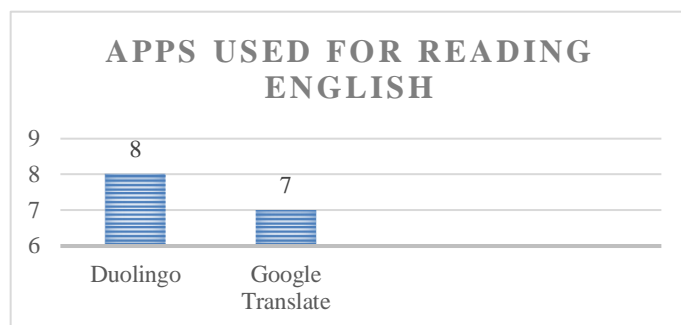


Figure 9. Apps Used for Reading English

Furthermore, they considered English reading as necessary for higher education and career chances, which drove them to prioritize practical goals. The 27% of learners who prioritized knowledge acquisition most likely saw reading as a way to improve their understanding of various subjects. Meanwhile, a low percentage (7%) of learners who read for enjoyment indicated that they struggled with vocabulary, cultural allusions, or preferred reading in their language.

These findings aided the development of the E-Edutoon Reading Instruction, which emphasized structured reading skills and culturally relevant content. The e-book improved learners' comprehension skills and made reading English more enjoyable. The researchers designed the e-book with interactive and relatable elements to foster both academic advancement and reading enjoyment.

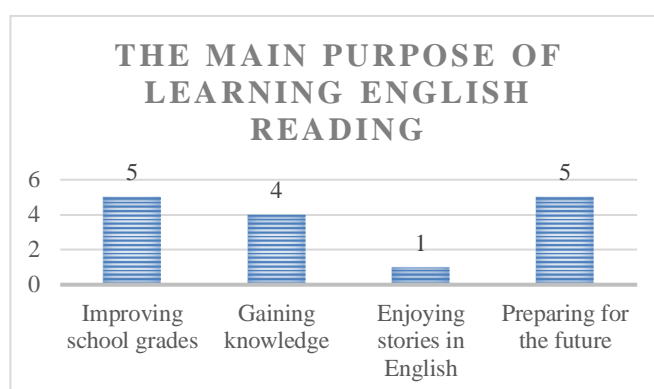


Figure 10. The Main Purpose of Learning English Reading

Figure 11 shows that learners preferred interactive learning methods over traditional approaches. Eighty percent of respondents chose educational games and interactive quizzes as their primary learning method. Meanwhile, 20% practiced independent reading at home. Interestingly, none of the respondents selected "Group discussion" or "Reading with teacher

guidance," suggesting they favored self-directed or game-based learning over teacher-led instruction.

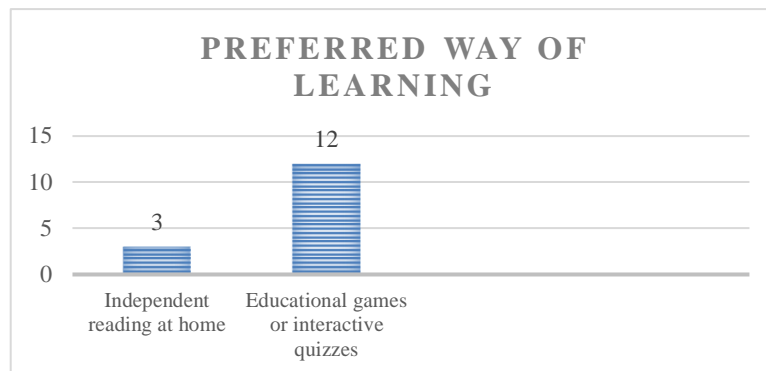


Figure 11. Preferred Way of Learning

Learners preferred educational games and interactive quizzes because these methods made learning more engaging and enjoyable [40]. The high percentage (80%) indicated that learners responded well to interactive elements that provided instant feedback and a sense of achievement. These methods kept them motivated and helped them retain information more effectively. Meanwhile, the 20% who chose independent reading at home demonstrated a willingness to learn autonomously. However, the absence of preferences for "Group discussion" or "Reading with teacher guidance" suggested that learners preferred learning at their own pace rather than relying on teacher-led instruction or peer discussions. This might have resulted from a lack of confidence in group settings or a belief that interactive methods were more effective.

These findings aligned with the purpose of the E-Edutoon Reading Instruction, which integrated interactive and engaging elements into the learning process. By incorporating game-based activities, quizzes, and self-paced reading exercises, the e-book aimed to accommodate learners' learning preferences. This approach ensured that learners remained engaged, built their reading confidence, and enjoyably developed stronger comprehension skills.

Figure 12 shows learners' preferences for enjoyable reading environments. Thirty-three percent of respondents chose a quiet classroom, highlighting the importance of a peaceful setting for focused reading. Twenty-seven percent preferred reading with background music, suggesting they found it helpful for relaxation. Meanwhile, 40% felt comfortable reading in any situation, demonstrating their ability to adapt to different environments. Notably, no learners selected "Reading with friends," indicating that they did not see social interaction as a supportive factor in their reading comfort. Learners chose different reading environments based on their comfort and concentration needs. The 33% who preferred a quiet classroom likely valued a peaceful atmosphere that helped them focus without distractions.

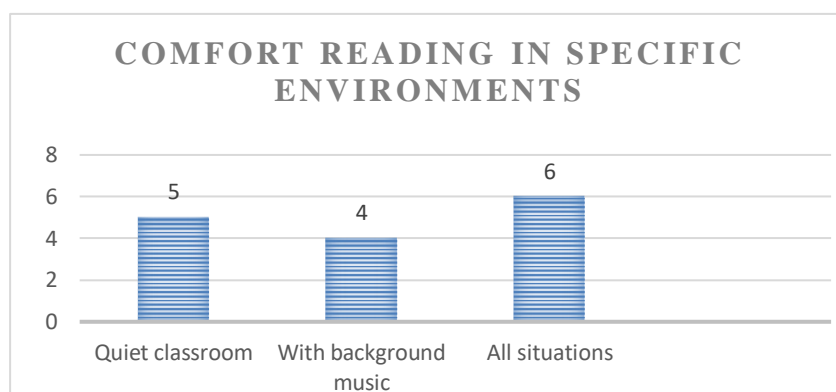


Figure 12. Comfort Reading in Specific Environments

Meanwhile, 27% of those who enjoyed reading with background music probably found that music created a relaxing setting that enhanced their reading experience. The 40% who felt comfortable reading in any situation demonstrated flexibility in their reading habits. Their ability to adapt to various environments suggested that they could concentrate regardless of background noise or surroundings. Additionally, since no learners selected "Reading with friends," they likely viewed social interaction as a distraction rather than a supportive reading environment. These results highlighted the importance of creating a flexible and engaging reading experience in the E-Edutoon Reading Instruction. It was in agreement with the research by Akmal et al. [3]. The e-book incorporated interactive elements that allowed learners to engage with the material in both quiet and dynamic settings. By offering self-paced reading exercises and engaging activities, the e-book ensured that learners could enjoy reading in their preferred environment while still developing their comprehension skills effectively.

The data presented above were collected through the questionnaire. Furthermore, an additional collection of data was obtained through an interview with an English teacher, concentrating on several important topics: (1) learners' learning needs, (2) preferences for instructional media, (3) the effectiveness of the learning process, and (4) the classroom context and available facilities. The subsequent response from the teacher has been examined and expanded upon based on the interview questions.

The researcher: What are your learners' primary difficulties reading English texts?

"Thank you for the question. The main difficulty learners face is a lack of vocabulary mastery and the fact that they have not developed a reading habit. For example, even if they know the vocabulary, if they rarely read, it will still be hard for them to understand the text. So, vocabulary mastery and reading habits must go hand in hand."

English teacher

The researcher: Which component do you believe needs the most work (e.g., vocabulary, understanding, reading speed)?

"The most important thing to improve depends on the student's level. But if I had to pick one, I would say vocabulary first. Vocabulary is the key to understanding a text. Comprehension is also important for answering questions, and reading speed matters,

especially for tests like ASPD. In conclusion, comprehending the text will be easier if learners have a good vocabulary understanding.”

English teacher

The researcher: What media or strategies are most commonly used to assist learners in understanding English texts?

“To understand English texts, learners can use skimming and scanning strategies. But it should not just be explained in theory—they also need hands-on practice to understand how to use these techniques.”

English teacher

The researcher: Have you ever used electronic learning resources for reading (e-books, apps)? If so, what was their level of effectiveness?

“E-books or apps are rarely used, to be honest. Learners find it easier with paper because that is what they are used to. But of course, it depends on the student’s needs since every class is different. So, it is best to combine traditional and digital methods for a more flexible approach.”

English teacher

The researcher: Do you believe your learners prefer to study visually, auditorily, or a combination of the two of them?

“Learners tend to learn better with visuals, especially if they are engaging. Usually, they look at the pictures first, then get curious and read the text.”

English teacher

The researcher: Can interactive learning material, like educational cartoons, benefit learners? Why?

“Oh, this appears to be very trendy at the moment, Cartoon! Cartoons are highly effective as they use more visuals and less text, facilitating learners' better understanding. Furthermore, cartoons present a distinct progression of events, maintaining learners' interest and curiosity regarding the story's events. However, offering a list of key vocabulary from the text remains essential to aid in understanding. It would enhance the experience if these vocabulary words were paired with appropriate images.”

English teacher

The researcher: How do you assess your learners' understanding of English texts?

“Yes, of course, by giving tests. But sometimes, learners guess the answers randomly. So, besides written tests, we can also ask them questions directly to check their understanding.”

English teacher

The researcher: Which strategies or techniques most successfully teach reading skills?

“The most effective strategy or technique should be flexible and adapted to the student's abilities. The key is choosing a strategy that can be applied in the classroom.”

English teacher

The researcher: Do you have any recommendations for creating interactive learning materials like the Electronic English Educational Cartoon (E-EduToon)?

“It should also match the learners' age. The text needs to be engaging and appropriate for them. Adding challenges like crossword puzzles, circle-the-word activities, and fill-in-the-blank exercises can make learning more fun.”

English teacher

The researcher: How much time do you generally devote to reading and teaching in one session?

“It also depends on the class schedule and the student’s capabilities.”

English teacher

The researcher: Are there any technological limits in your classroom that should be considered (such as device availability and internet connectivity)?

“Technical issues? Usually, it is internet problems. But if we need internet access, the teacher can provide a hotspot. Also, we must prepare speakers and check the audio quality beforehand to ensure learners can hear clearly.”

English teacher

The interview revealed that learners struggle with English reading comprehension due to unfamiliar vocabulary and lack of regular practice. The E-Edutoon Reading Instruction should incorporate structured vocabulary exercises, practical reading strategies, and interactive tasks to improve comprehension. Visual materials like cartoons can increase learners' curiosity and motivation. The e-book should be available in both printable and digital formats, and interactive learning materials, such as vocabulary lists with images, can enhance word retention and comprehension. Assessment should involve activities that require learners to demonstrate understanding through discussions and interactive exercises. The e-book was presented on a projector, allowing learners to view the material without opening each document individually. This strategy streamlined the instruction, improving its effectiveness and efficiency. The e-book should match learners' ages and interests and incorporate interactive challenges to make learning more enjoyable.

3.2 Design

During the design stage, the e-book was created with Canva and Book Creator to ensure it was visually appealing and user-friendly. The book was developed based on the respondents' preferences, which revealed an interest in adventure and cultural themes. To engage learners, the e-book was enhanced with appealing cartoon pictures and interactive exercises that tested their comprehension of the narrative. The material design focuses on improving learners' reading skills using reading instruction methodologies based on local Javanese culture. Interactive story-based exercises help learners comprehend texts in a realistic context, expand their vocabulary, and enhance their reading abilities. The material is organized into three sections: Pre-Reading exercises, While-Reading Activities, and Post-Reading Activities, following the Presentation, Practice, and Produce (3P) language teaching method [41]. The reading teaching method includes scaffolding, contextual learning, and interactive learning to promote student engagement. The activities and assignments include filling in the blanks, completing sentences with the correct form of the verb "be," answering reading comprehension questions, and promoting critical thinking. The game Cublak -

Cublak Suwung is employed for speaking practice. The material is an interactive e-book with graphic images and audio readings to enhance text comprehension and pronunciation skills. This combination of tactics is believed to be more effective in developing learners' reading skills while offering a fun and meaningful learning experience.

Table 2. Lesson Plan

Timing	PPP Stage	Description of Activity *What will the teacher/learners do? What are the instructions for this activity?	Materials
15 minutes	Presentation (Pre-Reading)	<p>Presenting on screen E-EduToon:</p> <ul style="list-style-type: none"> • Introduction to Characters: The teacher introduces the story's characters by showing their illustrations and briefly describing their roles. • Vocabulary Introduction: Introduce key vocabulary from the story (e.g., adventure, kris, jungle, gorilla, challenge, wisdom). Use pictures and simple definitions to explain the words. • Engagement Questions: The teacher shows pictures from page 4 of the E-EduToon book featuring wayang, keris, and Indonesian traditional food and asks learners engaging questions to spark curiosity before reading. • Learners do a guessing activity (words to pictures) using flashcards. 	LCD, Laptop, Speaker, E-EduToon, Flashcard
30 minutes	Practice (While Reading)	<ul style="list-style-type: none"> • Learners read The Quest for Kalimosodo Kris using E-EduToon with guidance from the teacher. • Guided comprehension activities: <ol style="list-style-type: none"> a. Complete the names of verbs (Learners fill in missing letters of action words from the text.) b. Complete the sentences with the correct form of 'be' (Learners practice using present tense forms like is/are.) c. Put the words in the correct sentence order (Learners arrange jumbled words into correct sentences.) d. Arrange the sentences based on the order of the story. • The teacher asks learners comprehension questions and discusses the key events in the story. (Checkpoint Question) 	Printed worksheets for sentence-building tasks
30 minutes	Produce (Post-Reading)	<ul style="list-style-type: none"> • Higher-order Thinking Skills (HOTS) Questions: Learners answer open-ended questions that require analysis, evaluation, and creative thinking based on the story. • Creative Writing: Learners write a short paragraph about what they would do if they found a magical kris. • Speaking Practice: Learners play Cublak-Cublak Suwung. The student who loses picks a truth or dare card, which contains: <ol style="list-style-type: none"> a. A question about the story (e.g., Why do Gandhi and Banu help the gorilla?) b. A fun task related to the story (e.g., Act out the scene where the gorilla gives them a riddle!). • Reflection & Discussion: Wrap up by discussing the moral lesson of the story and its cultural significance. 	Printed worksheets for sentence-building tasks, truth and dare card

3.3 Development

The third step of the development process, as outlined in the ADDIE model, focused on implementing activities to enhance the product design. In this phase, several essential activities were carried out, including developing content based on the designed framework, creating the E-EduToon as the main media, conducting an initial trial through expert validation to gain feedback, and revising the product based on expert suggestions. To ensure quality and efficacy, learning material experts validated the e-book before its use in the learning process.

The cover of *The Quest of Kalimosodo Kris* perfectly captures the novel's overall tone by blending themes of adventure, culture, and wisdom. Gandhi and Banu were shown in the artwork as traveling through a lush, green jungle. Gandhi carried a traditional kris, symbolizing the cultural and historical significance of their cause. The wood background, towering trees, and warm sunlight streaming through inspired a sense of wonder and exploration. The title was crafted in an imaginative but beautiful tone to highlight the story's attractive and informative worth. This cover welcomed readers and set the stage for an exciting cultural journey.

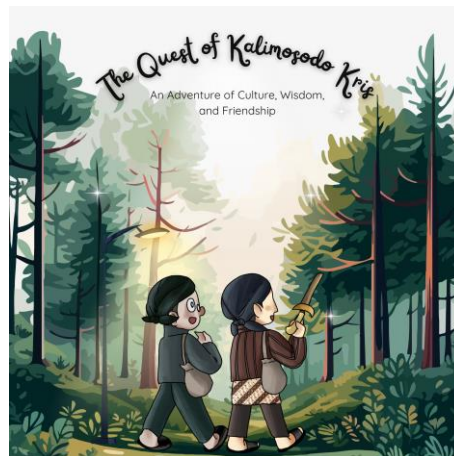


Figure 13. The Cover of E-EduToon

The *Table of Contents* in E-Edutoon provided a well-organized roadmap for learners and educators, ensuring a comprehensive and engaging learning experience. The book started with a preface, which offered an introduction to the purpose and objectives of the E-Edutoon. Following this, the Characters Introduction introduced the main protagonists, giving learners a glimpse of the figures they would follow throughout the adventure. The pre-reading section prepared learners by activating prior knowledge and setting the context for the story. Word Explorer helped learners familiarise themselves with key vocabulary in this section, ensuring they could comprehend the text more effectively. The While-Reading Section presented *The Quest of Kalimosodo Kris*, the main narrative that took learners on an adventurous journey filled with cultural wisdom and values. To deepen cultural understanding, two Intermezzo sections were included: *The Story of Kris*, which explained the historical and cultural significance of the kris, and *The Story of Cublak-Cublak Suwung*, which explored the traditional Javanese children's song and its meaning. In the Challenges section, learners engaged in interactive tasks and problem-solving activities related to the

story. The post-reading section then reinforced comprehension through HOTS (Higher Order Thinking Skills) questions, creative writing, and speaking practice, encouraging learners to analyze, create, and verbally express their understanding of the material. The journey concluded with a reflection segment, which prompted learners to connect their learning to personal experiences. The book also included a References section, which acknowledged sources used, and an Author's Profile, which provided background information about the creator of this e-Edutoon. This structured content ensured that learners enjoyed the adventure and gained language skills, cultural knowledge, and critical thinking abilities.

Table of Contents	
Preface	
Characters Introduction	1
Pre-Reading Section	2
• Word Explorer	3
While Reading Section (The Quest of Kalimosodo Kris)	5
• Intermezzo: The story of Kris	11
• Intermezzo: The story of Cublak-cublak Suwung	25
• Challenges	26
Post Reading Section	29
• HOTS Questions	29
• Creative Writing	31
• Speaking Practice	32
Reflection	33
References	34
Author's Profile	35

Figure 14. Table of Contents of E-EduToon

The *E-Edutoon* introduced various characters, each with a significant role in the plot. The main characters, Gandhi and Banu, set out on an exciting adventure packed with hardships and cultural insights. Along the trip, they encountered intelligent creatures who guided them and explained the significance of their quest. While Gandhi and Banu remained the major characters, the supporting characters enhanced the plot by providing depth to knowledge, friendship, and cultural appreciation. The trip taught these interactions essential lessons about problem-solving, bravery, and teamwork.

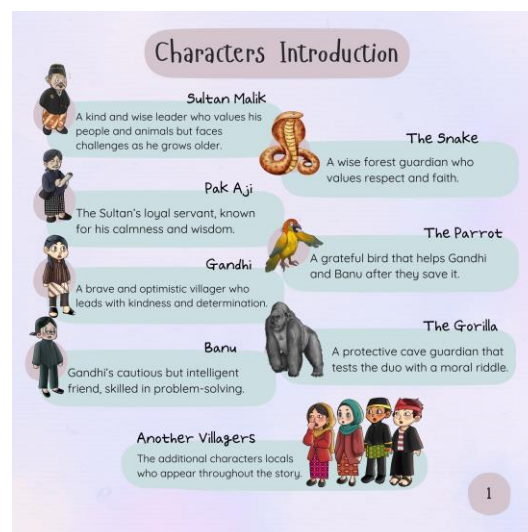


Figure 15. Characters Introduction

The *Word Explorer* part introduced key vocabulary by listing essential words and their Indonesian meanings. The teacher provided flashcards as a learning tool to help learners understand and remember these words. These flashcards enabled learners to correlate words with their meanings better, making vocabulary learning more interactive and interesting. Learners used flashcards to practice memorizing terms, which boosted their memory and enhanced their comprehension before diving into the novel. This method allowed them to read more confidently and focus on understanding Gandhi and Banu's experiences.



Figure 16. Word Explorer

Before going into the story, learners were asked to think critically by asking a leading question: "What challenges do you believe Gandhi and Banu will face in the forest?" This question was supported by a related illustration, which functioned as a pre-reading activity to activate learners' prior knowledge and stimulate their interest in the adventure. Learners engaged with the narrative before reading by anticipating challenging conditions, unexpected experiences, or the need for problem-solving. This project also helped them build critical thinking abilities and a reading goal, increasing their interest in Gandhi and Banu's journey.

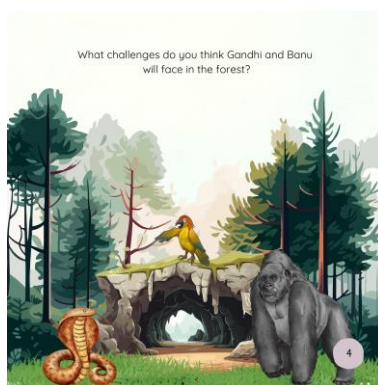


Figure 17. Guiding Question

The Challenges section designed a systematic series of activities that consistently improved learners' reading comprehension and critical thinking abilities; the first set of activities concentrated on fundamental language competencies (Figure 18).

Challenges

Join the games below to see how well you remember the story!

A. Complete the Names of Verbs:

- A _ _ O _ _ E
- H _ _ P
- S _ _ A _ _ H
- A _ _ S _ _ R
- S _ _ V _ _
- F _ _ L _ _ W
- I _ _ V _ _ E
- G _ _ _ E
- R _ _ E _ _ R
- P _ _ Y

B. Complete the Sentences with the Correct Form of "Be" (is, am, are):

- Sultan Malik is the leader of the sultanate.
- Gandhi and Banu _ _ _ _ _ looking for the Kalimasodo kris.
- The forest _ _ _ _ _ big and dark at night.
- Sultan Malik _ _ _ _ _ kind and loves animals.
- The parrot and the snake _ _ _ _ _ helpful to Gandhi and Banu.
- The villagers _ _ _ _ _ worried when Sultan Malik became sick.
- Pak Aji _ _ _ _ _ Sultan Malik's loyal servant.
- The parrot _ _ _ _ _ stuck in a net when Gandhi and Banu find it.
- Gandhi and Banu _ _ _ _ _ able to pass the snake after praying.
- The gorilla _ _ _ _ _ guarding the entrance to the cave.

26

C. Put the Words in the Correct Sentence:

- (The / is / forest / big)
- The forest is big.
- (the / for / looking / Gandhi / Banu / Kris / and / are)
- (pray / They / snake / before / the / pass / are)
- (the / is / loyal / servant / Pak Aji)
- (Kris / the / in / cave / the / found / They)
- (help / Sultan Malik / They / to / want)

D. Put the number of these events in the correct order:

1. Gandhi and Banu help the parrot escape from the net. ()
2. A big gorilla asks them a riddle. ()
3. Gandhi and Banu find the Kalimasodo kris in the cave. ()
4. They meet a big snake who tells them about the kris. ()
5. Gandhi and Banu arrive at the palace to meet Sultan Malik. ()
6. Sultan Malik announces a contest to find the missing kris. (1)
7. Gandhi and Banu pray before passing the snake. ()
8. Sultan Malik is pleased and asks Gandhi and Banu to make a wish. ()
9. Gandhi and Banu prepare to search for kris in the forest. ()

27

E. Checkpoint Question:

- Who is the leader of the sultanate?
- What advice does Pak Aji give to Gandhi and Banu before they enter the forest?
- What does the parrot offer to do when Gandhi and Banu help it escape from the net?
- What is the riddle that the gorilla asks Gandhi and Banu to answer?
- What do Gandhi and Banu wish for after returning the kris to Sultan Malik?

28

Post-Reading
Section (HOTS)

A. True or False Questions!

Work with your seatmate. Write "T" if the statement is true. If false, write "F" and correct it in the word box.

1. Sultan Malik is the leader of the sultanate. (T)
2. Gandhi and Banu are friends who help Sultan Malik find his missing horse. ()
3. Pak Aji is Sultan Malik's loyal servant. ()
4. When Gandhi and Banu find it, the parrot is stuck in a tree. ()
5. The snake allows Gandhi and Banu to pass after they give it food. ()
6. Gandhi and Banu find the kris inside a cave. ()
7. The gorilla gives them a riddle about what is more valuable than gold. ()
8. Sultan Malik asks Gandhi and Banu to make a wish after they return the kris. ()
9. Gandhi and Banu ask for a special wish to become the Sultan's advisors. ()
10. Sultan Malik's kris, Kalimasodo, is found in the forest. ()

29

B. Answer the questions below! Write your answers in complete sentences.

1. Why did Sultan Malik stop riding his horse and stay in the palace?
2. Why did the snake let Gandhi and Banu pass after they prayed?
3. How did the parrot help Gandhi and Banu in their journey?
4. Why did Sultan Malik smile when Gandhi and Banu told him about the snake, parrot, and gorilla?
5. What is your opinion about the challenges Gandhi and Banu faced during their journey?

30

C. Creative Writing

Write a short paragraph about your favorite part of the story and explain why you think it is interesting!

Work with your seatmate :)

Writing Box

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D. Speaking Practice

Let's play Cublak Cublak Suwung! If you lose, pick a card from the truth or dare pile and do what it says. Make sure to speak clearly when you choose your card!

Cublak Cublak Suwung Song


Cublak cublak suwung, Sawenige tinggetester
Mambu ketutuhung gudhet, Pak gempang lera lera
Sapa ngguyu ndelik aje, Sir sir pang dele gasong
Sir sir pang dele gasong


Click here for the truth and dare card!


32

Reflection

What do you think about this E-EduToon?


Fun


Challenging


Confusing


Frustrating

You may write your reason here!

33

Figure 18. Tasks and Reflection

Learners began by listing verbs, thereby improving their vocabulary recognition. The participants engaged in grammar exercises by completing sentences with the appropriate "be" form, thereby improving their comprehension of sentence structure. At that point, they focused on organizing words in the appropriate sequence, which facilitated the construction of grammatically correct sentences. Learners participated in comprehension-based tasks by numbering events in the narrative sequence, improving their capacity to organize events logically. The learners also responded to checkpoint questions that assessed their comprehension of essential narrative elements before progressing. Learners engaged with higher-order thinking Skills (HOTS) questions, starting with true or false items to assess their comprehension of factual information. The participants engaged with questions necessitating higher-order thinking skills, promoting in-depth analysis, speculation, and reasoning that extend beyond mere details. Learners engage in creative writing to explore their imaginations and apply their learned concepts in a personalized manner. Learners engaged in interactive speaking practice through the Cublak-Cublak Suwung game, employing truth or dare cards to promote spontaneous English conversation. The structured challenge progression facilitated step-by-step skill development in learners, beginning with fundamental language comprehension and advancing to critical thinking and creative expression. The activities enhanced vocabulary, grammar, sequencing, and analytical skills while maintaining student engagement through interactive and culturally relevant assignments. A reflection session also allowed students to reflect on their learning, share their thoughts on the tasks, and find ways to improve. This helped them improve their reading and critical thinking skills overall.

3.4 Implementation



Figure 19. Class Activity

E-Edutoon's implementation phase was located at a tutoring center, and it included expert validation and classroom trials to determine its usefulness in real-world learning contexts. Expert validation assessed the accuracy and quality of E-Edutoon, which included local culture-based reading training. The validity level was graded as highly acceptable, indicating that the content, instructional design, and product design were appropriate for achieving the desired learning results. We conducted classroom trials after expert validation to assess E-Edutoon's suitability as a reading practice resource in a real-world educational setting. The implementation phase in the classroom followed a structured lesson plan based on the Presentation, Practice, and Production (PPP) model. The activities enhanced students'

engagement, reading comprehension, and cultural appreciation through interactive learning. The researchers divided the lesson into three stages as follows.

The pre-reading stage began with the teacher greeting pupils and conducting a brief prayer to foster a focused and respectful learning environment. After setting an appropriate environment, the teacher introduced the story's main characters by showing illustrations of Gandhi, Banu, and Sultan Malik and briefly explaining their roles. To increase vocabulary, students participated in an interactive activity that included illustrated flashcards introducing nouns, verbs, and adjectives. After introducing learners to these words, the teacher asked, "What challenges do you think Gandhi and Banu will face in the forest?" This question invited students to make predictions and actively participate in the story before reading. A class discussion took place, during which students presented their perspectives, and the teacher helped them relate their comments to the story's topic.

During the while-Reading phase, students engage with *The Quest for Kalimosodo Kris* utilizing E-EduToon under the instructor's supervision. Multiple comprehension exercises followed the reading process, such as filling in missing letters in action verbs, finishing statements with the appropriate "be" form, and arranging jumbled words into complete sentences. Furthermore, students arranged moments from the narrative to enhance their comprehension of its structure. During this phase, the educator guided discussions by posing comprehension inquiries and encouraging learners to think about key moments in the narrative.

Students participated in advanced cognitive tasks during the post-reading phase to enhance their understanding. They responded to open-ended inquiries that stimulated critical analysis and imaginative replies. To improve writing proficiency, students produced a brief piece imagining their actions upon discovering an extraordinary kris. Speaking practice was integrated into the Cublak-Cublak Suwung game when the losing student chose a truth or dare card featuring either a question regarding the narrative or an entertaining task, such as performing a scene. The lesson ended with a reflection session in which students analyzed the moral aspects of the story and its cultural importance, thus enhancing reading comprehension and cultural appreciation.

The results indicated that the E-Edutoon was extremely practical, making it simple for learners and teachers. It provided ease, efficiency, and an intriguing digital format while maintaining learners' attention and motivation. However, to function properly as an online learning platform, the E-Edutoon required a reliable Wi-Fi connection. Although connectivity was an issue, the evaluation revealed that the product's design was good, well-organized, and consistent with learning objectives. These features made it an effective tool for boosting reading education.

3.5 Evaluation

The evaluation phase represented the concluding stage of the ADDIE methodology, which occurred after the completion of the previous four phases. During this stage, it was observed that while using electronic-based materials enhanced engagement, some students experienced a decline in focus due to notifications or the temptation to access social media. Digital devices, with their notifications, multimedia material, and other apps, can be

distracting. Such behavior can result in shorter attention spans, making it difficult for kids to focus on educational material and understand longer texts [38]. To address this issue, implementing guidelines or features that minimized distractions helped maintain students' concentration during learning sessions.

Additionally, teacher guidance and clear rules were crucial in ensuring students stayed focused and used the materials effectively. By setting expectations and providing supervision, teachers helped students develop better self-discipline and maximize the benefits of digital learning tools. Based on student feedback, the evaluation highlighted key aspects such as comprehension, engagement, motivation, and usability. Most students found the content accessible, interactive features beneficial, and the platform easy to use, though some required teacher assistance and faced minor technical difficulties.

4 CONCLUSION

This study explores the challenge of limited engaging English reading materials, which often results in low student motivation, difficulties in vocabulary acquisition, and poor reading comprehension. To address this issue, E-EduToon, an interactive multimodal e-book rooted in Javanese local culture, is developed through a structured design process incorporating engaging visuals, audio, animations, and videos to enhance reading skills. It follows a culturally relevant reading instruction framework to support vocabulary development and comprehension. The suitability of E-EduToon is assessed through student engagement, positive feedback, and expert validation scores (student rating: 4.22, material expert: 4.23, media expert: 4.33), confirming its effectiveness as supplementary reading material. While continuous refinements in grammar, punctuation, and activity design have strengthened its educational quality, limitations such as the small sample size and the lack of direct page navigation remain challenges that affect accessibility and generalizability. Future research should explore its adaptability across different educational contexts, enhance platform functionality with more interactive features, and expand its content to support other language skills. Collaboration among educators, researchers, and ed-tech developers is essential to refining interactive e-books as a dynamic and sustainable tool for English language learning in Indonesia.

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