Investigating the Effect of E-Book Utilization on Students' Comprehension and Reading Interest at SMAN 01 Sukau

Pia Alpiana[1]*, Nur Syamsiah[1], Sri Suci Suryawati[1]
[1]Universitas Islam Negeri Raden Intan Lampung
piaalpiana18@gmail.com*

ABSTRACT

This research investigates the influence of e-book utilization on students' reading comprehension and reading interest at SMAN 01 Sukau, motivated by the growing shift toward digital learning and the persistent low reading interest in Indonesia. Employing a quantitative design, the study involved 24 students who completed questionnaires supported by observation and document analysis. The results show that e-books have become a regular part of students' reading routines, with most respondents reading e-books once a week. Although printed books remain the preferred format for 41.7% of students, the majority acknowledged the convenience, accessibility, and customizable features of e-books. Over half of the students reported that their comprehension and retention when using e-books were comparable to printed books, while 41.7% experienced improved understanding with digital formats. E-books also positively affected students' reading motivation, with 75% stating that they spent the same or more time reading digitally and over half reporting increased interest due to features such as instant access to materials and environmentally friendly benefits. Nonetheless, several challenges were identified, including limited annotation tools, difficulty concentrating on screens, navigation issues, and occasional technical constraints. Overall, the findings indicate that e-books offer practical learning advantages and can enhance reading engagement, though improvements in digital literacy and e-book usability are necessary to optimize their effectiveness. This study contributes to understanding how digital reading tools support learning in Indonesian high schools and highlights the need for strategies that address both motivational and technological barriers in digital reading environments.

INTRODUCTION

Reading comprehension is a fundamental skill in English as a Foreign Language (EFL) learning, as it enables students to understand, interpret, and integrate information from written texts (Pardede & Rafli, 2023). In the Indonesian EFL context, reading has become an essential academic component; however, many students still struggle to comprehend English texts due to limited vocabulary, low motivation, and difficulties in processing complex sentence structures. At the same time, the rapid development of digital technology has transformed the way learners

access learning resources, including the shift from printed books to electronic books (e-books) (Putri & Damayanti, 2025).

E-books offer several advantages, such as portability, interactive features, adjustable fonts, built-in dictionaries, and multimedia elements. These features are believed to support students' reading comprehension and increase their reading interest by providing a more engaging learning experience (Putri & Damayanti, 2025). Previous studies have shown that digital reading materials can enhance learners' motivation, facilitate comprehension through multimodal input, and improve accessibility to academic content. Nevertheless, research also indicates that digital distractions, screen fatigue, and insufficient digital literacy may negatively influence comprehension outcomes (Salsabila et al., 2025).

In many Indonesian schools, including rural areas, the integration of e-books is still developing. Students may have different levels of technological readiness, which influences their ability to benefit from digital learning materials (Salsabila et al., 2025). At SMAN 01 Sukau, preliminary observations suggest that students show varied engagement toward reading activities, with some demonstrating higher motivation when using e-books, while others prefer printed texts for focus and comfort. These differences highlight the need to examine how e-book utilization specifically affects students' reading comprehension and their interest in reading English texts.

Despite the increasing use of digital learning tools, empirical research focusing on the effect of e-book utilization on reading comprehension and reading interest in rural Indonesian EFL settings remains limited. Therefore, this study aims to investigate the influence of e-book usage on students' reading comprehension and reading interest at SMAN 01 Sukau. The findings of this study are expected to contribute to the development of effective digital-based reading instruction and support the implementation of technology-enhanced learning in Indonesian high schools.

REVIEW OF LITERATURE

Reading is a fundamental language skill that everyone needs to master. It plays a central role in language acquisition and serves as a gateway to knowledge, since most information is preserved in written form. At its core, reading is the process of interpreting printed symbols and understanding their meaning. In other words, it is the act of extracting the author's intended message or information from a text in the most effective way possible.

Importance of reading in learning: Enhances Language Skills: Reading helps develop vocabulary, grammar, and comprehension, which are essential for effective communication. And Improves Critical Thinking: It fosters analytical and interpretive skills, enabling learners to evaluate information critically. Reading is seen as an art that provides a foundation for a person to construct their understanding of life, while also providing the components they use to shape their view of the world (Hoq & Hassan 2015).

Richards and Schmidt Reading is understood as the process of building meaning from printed or written texts (Richards & Schmidt, 2002). The essential aspect of reading is the reader's ability to comprehend the content of the text and accurately obtain the information it conveys. Furthermore, Reading is described as the skill of extracting meaning from written text and interpreting the information accurately (Grabe, 2009). Reading requires the reader to have the skill to extract and interpret information accurately from the text..

Reading serves as the foundation for gaining knowledge. It is not merely a source of pleasure but also a vital necessity, functioning as one of the most fundamental tools of education. Reading is a challenging skill, as it requires the reader to uncover the ideas within a text by considering the author's perspective (Grabe, 2009). Ur explain that reading essentially means both recognizing and comprehending written material. She further outlines several assumptions about the nature of reading: readers must perceive and decode letters to form words; full comprehension of a text requires understanding its individual words; the greater the number of symbols (letters and words) in a passage, the longer the reading process will take; meaning is derived from what is read; and overall understanding of a text depends on grasping the words that compose it (Ur, 1996).

Reading is viewed as an interactive activity between the reader and the text, which leads to comprehension (Kalayo, 2007). Texts consist of letters, words, sentences, and paragraphs that carry meaning. To uncover this meaning, readers rely on their knowledge, skills, and strategies. In this way, reading becomes a form of interaction between the reader and the written material. Readers must apply their abilities to grasp the content of the text. From this explanation, it can be concluded that reading is a process that requires interpreting meaning by focusing on the words presented and accurately understanding the information conveyed.

Comprehension is the ability to construct meaning through interaction between reader and text. Successful comprehension requires metacognitive strategies that support inference, synthesis, visualization, and question generation (Pahrizal et al., 2025). Students who struggle with reading often have limited ability to use prior knowledge, identify key details, and decode efficiently. explain that reading comprehension is a multicomponent, highly complex process involving interactions between readers and the variables they bring, such as background Application of prior knowledge and learning strategies.

Students who experience difficulties in reading frequently come across challenges in comprehension and needs opportunities for using cognitive tools designed to enhance understanding. A young person who came in behind peers of the same age in age-appropriate reading abilities was referred to as a "lower-level reader". Strong inferences and deep connections between concepts are difficult for readers to create, and their retellings and reactions to readings are unsitable due to their inability to use past information, recognize crucial elements, and decode content. Lower-level readers also acquire a restricted capacity for performance (Jelena, 2024). According to Jannete, reading comprehension goes beyond simply reacting to a text; it encompasses a deeper process of understanding.. Reading comprehension is a multifaceted and complex process that requires continuous interaction between readers and the knowledge, strategies, and experiences they contribute to the text. It is also influenced by factors within the text itself, such as the reader's interest, familiarity with text types, and ability to interpret them.

A reader's interest significantly influences their level of comprehension. According to Hastomo and Zulianti (2022) reading interest is a multimodal emotion impacted by textual, sensory, emotional, and physical elements. Harris, and Dole argue that interest affects both cognitive and affective aspects of reading, influencing how deeply students process and remember information (Harris & Dole, 2017). They further suggest that interest can compensate for lower reading skill levels, allowing readers to engage with more complex texts. Reading interest is a multifaceted attitude or emotion shaped by the unique traits of each reader (Harris & Dole, 2017). These factors include a person's physical and emotional condition when reading, their personal experiences, their favourite activities and hobbies, and their ability to understand the elements contained in the text.

These elements include writing style and form, logical consistency in the presentation of content, and the interaction between the readers and the text covering how far the text can inspire the reader's imagination, foster empathy for the characters, fulfill emotional needs, or evoke certain feelings during the reading process. Additionally, Sutiyono and Hastomo (2022) stated that it can be explained that reading interest exerts a significant influence on the cognitive and affective aspects of reading practices. It has an impact on students' reading habits as well as their opinions of what they have read. Students' comprehension improves more when they are spending time with a book than when they are not, and they usually gain a deeper understanding of what they are reading (Harris & Dole, 2017). In addition, students' interest in reading material makes them more likely to read using more effective strategies and remember the content of the text for longer. In addition, a high level of interest in reading also encourages students to make a greater cognitive effort during the reading process. Another important benefit of reading interest is its role as a balancing factor when students face difficult or complex texts. A number of studies show that the level of difficulty of reading becomes less decisive when students are genuinely interested in the content of the text. In other words, students are better able to understand even texts that are

above their ability level when the reading material matches their interests. Based on Duke, Pearson, Strachan, and Billman, interest can act as a compensanting factor that helps cover students' reading ability limitations when dealing with challenging texts (Duke et al., 2011).

According to Mentari, an e-book is a digital publication composed of text, visuals, or sound, designed to be read on computers and portable electronic devices like smartphones and tablets (Mentari et al., 2018). If a printed book consists of a collection of papers containing text or images, while an e-book contains digital information that can also take the form of text or images. The impact of e-books on reading comprehension has garnered significant attention and discussion in recent years. Some studies suggest that e-books can enhance comprehension through features such as multimedia support and interactive elements.

In today's era, most people own gadgets, and many prefer carrying digital devices instead of physical books. Bringing several books along can often feel inconvenient and burdensome, making digital reading a more practical choice. E-books enhance reading by providing greater practicality and accessibility compared to traditional formats (AlGhamdi et al., 2018). The rise of e-readers such as Kindle, Nook, iPad, and similar devices has significantly increased the popularity of e-books. Digital books can be downloaded with ease, and while some are available for free, others are sold at a relatively low price compared to printed editions. Many readers are willing to pay because electronic books are more affordable and offer practical advantages, such as easy portability, convenient storage, and access to a large collection directly on their device. Moreover, e-books enable students to quickly search for words or phrases with a simple touch, and many e-readers provide features like highlighting and note-taking to support learning.

E-books are digital versions that present text along with other forms of content, developed by combining the conventional idea of a book with the advanced capabilities offered in electronic platforms. They typically include features such as search and cross-referencing options, hypertext links, bookmarks, notes, highlighting tools, multimedia elements, and interactive functions (Vassiliou & Rowley, 2008). In the modern educational landscape, technology integration in EFL learning has become increasingly essential. With the rapid advancement of digital tools, the use of technology in language classrooms is not just a supplementary option but a critical component that transforms how students learn, practice, and apply language skills (Nurhidayat et al., 2024).

METHOD

This research utilized a quantitative descriptive design to carry out the study investigate students' patterns of e-book utilization, their reading comprehension when using digital materials, and the extent to which e-book features influence their reading interest. The descriptive approach was chosen because it enables a systematic and objective examination of students' perceptions based on numerical data (Sugiyono, 2017). The participants of the study consisted of 24 students from SMAN 01 Sukau in the 2024/2025 year Scholl, selected through purposive sampling based on their active use of e-books in learning activities.

The main tool for gathering data in this study was a structured questions. The questionnaire was adapted from validated instruments on digital reading behavior and was divided into components measuring frequency of e-book use, preference for reading formats, convenience in using e-books, comprehension levels, reading strategies, motivation, reading duration, the influence of e-book features, perceived benefits, and challenges encountered. All items were assessed using a five-point Likert scale, with responses ranging from 1 (very low/strongly disagree) to 5 (very high/strongly agree), allowing the results to be statistically processed and interpreted. Before administration, the instrument was reviewed by experts to ensure clarity, relevance, and alignment with the study's objectives (Sugiyono, 2017).

The data collection process was conducted in a single classroom session, The researcher clarified the objectives of the study and gave guidance on how to complete the questionnaire, and assured participants that their responses would remain confidential and used solely for academic purposes. Students completed the questionnaire in either printed or digital form, depending on

their preference, and the researcher immediately checked the responses for completeness.

Data analysis was carried out with the aid of SPSS (Statistical Package for the Social Sciences) version 25. Descriptive statistical procedures including mean scores, standard deviations, minimum and maximum values, and frequency distributions were applied to summarize students' reading behaviors and perceptions. These statistical results provided the basis for interpreting trends related to the use of e-books, comprehension levels, motivational factors, benefits, and digital reading challenges.

Throughout the research process, ethical considerations were prioritized. Participants were informed of the aim of the study and voluntarily consented to participate, and anonymity and confidentiality were preserved by avoiding any collection of personal identifying information. All procedures were conducted in accordance with academic ethical guidelines established by the English Education Department.

This covers aspects such as the research design, the population and sample, the instruments used for data collection, and the procedures applied in data analysis. All stages of the study were carried out in line with the ethical standards set by the English Education Department, including the design of the research, the selection of participants, the tools for gathering data, and the methods of analyzing the results.

FINDINGS AND DISCUSSION
E-Book Utilization Among Students

The findings indicate that students at SMAN 01 Sukau demonstrate a relatively high level of e-book utilization. As shown in Table 1, the frequency of e-book reading reached a mean score of 3.96, categorized as "once a week," indicating that e-books constitute a regular component of students' reading practices. This pattern reflects the increasing integration of digital materials into the learning environment and supports Rogers' Diffusion of Innovation theory, wherein accessibility and perceived advantages accelerate technological adoption (Rogers, 2003).

In terms of format preference, students reported a mean score of 3.75, suggesting a tendency toward favoring e-books, although printed texts remain significant for some learners. The variability in preference aligns with Pardede's findings, which highlight that despite the rising popularity of digital reading, printed books continue to be valued for their reduced distractions and reading comfort (Pardede & Rafli, 2023).

Table 1. Descriptive statistics of research variables

	N	Minimum	Maximum	Mean	Std. Deviation
VAR0001	24	3	5	3.96	.359
VAR0002	24	2	5	3.75	.897
VAR0003	24	1	5	3.71	1.122
VAR0004	24	3	5	3.54	.721
VAR0005	24	1	5	3.25	1.422
VAR0006	24	1	5	2.46	1.351
VAR0007	24	2	5	3.96	.908
VAR0008	24	2	5	3.58	.929
VAR0009	24	2	5	3.67	1.129
VAR0010	24	0	5	4.50	1.103
VAR0011	24	1	5	2.46	1.351
Valid N (listwise)	24				

Reading Comprehension When Using E-Books

The data show that students' reading comprehension when using e-books is relatively strong, evidenced by a mean score of 3.54. Most respondents (58.3%) reported that their

comprehension was "about the same" as printed texts, whereas 41.7% perceived slightly or significantly better comprehension when using e-books. This tendency aligns with Kintsch's Construction–Integration Theory, which posits that digital tools such as search functions, highlighting features, and quick access to definitions facilitate the construction of mental representations necessary for deeper comprehension (Butterfuss et al., 2020).

Students' use of digital reading strategies provides further insight. Highlighting (29.2%) and skimming-scanning (25%) were the most utilized strategies, followed by bookmarking and keyword search. Such strategies reflect the flexible and supportive nature of digital reading environments, which McNamara argues can reduce cognitive load and enhance meaning-making processes for learners (McNamara, 2007).

Nevertheless, the presence of comprehension barriers remains noteworthy. Difficulties such as screen fatigue, trouble concentrating, and challenges navigating digital pages were reported by a considerable portion of respondents. These findings reinforce Pardede and Rafli's (2023) observation that digital reading may hinder deep reading in students who struggle with digital distractions or have lower levels of digital literacy.

Reading Interest in the Use of E-Books

Despite frequent use of e-books, students' motivation to read using digital materials was relatively low (M = 2.46). The majority reported being unmotivated or only slightly motivated. This indicates that e-book use alone is insufficient to enhance students' intrinsic reading interest. According to Deci and Ryan's Self-Determination Theory, motivation increases when activities satisfy needs for autonomy, competence, and relatedness. While e-books provide autonomy and convenience, they may not sufficiently address emotional engagement or personal relevance factors known to increase reading interest (Ryan & Deci, 2017).

Influence of E-Book Features on Interest

Students reported a moderate increase in interest attributed to e-book features (M = 3.58). Adjustable font sizes, instant dictionary access, and customizable display settings were perceived as enhancing situational interest, supporting Hidi and Renninger's Four-Phase Model of Interest Development emphasizes how external factors can spark temporary engagement (Hidi & Renninger, 2006).

However, the data also show that these features were not strong enough to produce sustained or personal interest. This suggests that pedagogical design not merely the digital platform is essential for cultivating deeper and long-lasting reading engagement.

Perceived Benefits and Challenges of E-Book Use

Overall, the findings suggest that while e-books positively contribute to accessibility and comprehension, their influence on reading interest is less substantial. Students benefit from the functional features of e-books, yet these advantages do not translate directly into increased intrinsic motivation. The integration of e-books in reading instruction must therefore be accompanied by pedagogical strategies that enhance engagement, encourage critical reading, and build personal interest through meaningful content and supportive learning environments.

The study expands existing literature by providing evidence from a rural Indonesian high school context, highlighting both the potential and the challenges of implementing digital reading resources in under-researched educational environments.

CONCLUSIONS

The findings of this study indicate that e-books play a meaningful yet uneven role in shaping students' reading habits, comprehension, and interest. Overall, students at SMAN 01 Sukau demonstrated relatively frequent use of e-books and perceived them as convenient and accessible reading tools. The most prominent advantage reported was the instant access to a wide range of

materials, which strongly supports the practicality and usefulness of digital reading platforms. Students' reading comprehension when using e-books was also generally positive, with many indicating that digital features such as searchable text, highlighting tools, and customizable display settings enhanced their understanding. These results align with theoretical perspectives suggesting that digital reading environments can facilitate more efficient information processing and support comprehension.

However, the influence of e-book use on reading interest was considerably weaker. Despite their frequent usage, students reported low motivation toward reading via digital platforms, indicating that the functional benefits of e-books do not automatically translate into intrinsic engagement. This highlights an important gap between accessibility and genuine interest, implying that educators must integrate e-books with instructional strategies that foster deeper motivation, such as guided reading activities, meaningful material selection, and stronger digital literacy support. Additionally, several challenges, such as difficulty concentrating on screens, limited annotation options, and occasional technological constraints, continue to hinder optimal use of e-books for learning. These issues underscore the need for improved digital reading training and better infrastructure to maximize the educational potential of e-books.

In conclusion, while e-books enhance accessibility and can support comprehension, they do not independently strengthen students' reading motivation. Effective use of e-books in educational contexts requires a balanced approach that combines digital tools with pedagogical strategies aimed at cultivating sustained interest and reducing technological barriers. Future research could examine interventions that integrate e-books with motivational and metacognitive reading strategies or explore comparisons between digital and printed reading in broader populations to deepen understanding of digital reading behaviors.

REFERENCES

AlGhamdi, A., AlQadi, S. Z., AlHammad, J. M., & Shukri, N. A. (2018). Reading needs analysis of EFL learners in the Saudi context: Identifying needs and deficiencies. *International Journal of English Language Education, 6*(2), 92–105. https://doi.org/10.5296/ijele.v6i2.13863

Butterfuss, R., Kim, J., & Kendeou, P. (2020). Reading comprehension. In *Oxford Research Encyclopedia of Education*. Oxford University Press. https://doi.org/10.1093/acrefore/9780190264093.013.865

Duke, N. K., Pearson, P. D., Strachan, S. L., & Billman, A. K. (2011). Essential elements of fostering and teaching reading comprehension. *International Reading Association*.

Grabe, W. (2009). *Reading in a second language: Moving from theory to practice*. Cambridge University Press.

Harris, P., & Dole, S. (2017). Understanding why learners struggle with reading comprehension. *Australian Journal of Learning Difficulties, 22*(2), 121–138.

Hastomo, T., & Zulianti, H. (2022). The integration of the KWL (Know, Want, Learn) strategy and the Zoom conference in teaching reading: An action research. *Linguists: Journal of Linguistics and Language Teaching, 8*(1), 55–66. https://doi.org/10.29300/ling.v8i1.6574

Hidi, S., & Renninger, K. A. (2006). The four-phase model of interest development. *Educational Psychologist, 41*(2), 111–127.

Hoq, G., & Hassan, M. (2015). Reading as a tool of knowledge construction: A theoretical perspective. *Journal of Language Teaching and Research, 6*(4), 745–752.

Jelena, V. (2024). Predictors of reading comprehension and profiling of poor readers in Croatian: Educational and clinical perspectives. *Frontiers in Psychology, 15*, 1–16. https://doi.org/10.3389/fpsyg.2024.1297183

Kalayo, H. (2007). *Teaching English as a foreign language (TEFL)*. Alfabeta.

McNamara, D. S. (2007). *Reading comprehension strategies: Theories, interventions, and technologies*. Psychology Press.

Mentari, L., Sutinah, S., & Rahmawati, D. (2018). Digital books in education: Definitions and implications for learning. *Journal of Educational Media, 5*(3), 129–140.

Nurhidayat, E., Mujiyanto, J., Yuliasri, I., & Hartono, R. (2024). Technology integration and teachers' competency in the development of 21st-century learning in EFL classrooms. *Journal of Education and Learning, 18*(2), 342–349. https://doi.org/10.11591/edulearn.v18i2.21069

Pahrizal, N., Vintoni, A., Sotlikova, R., & Ya'akub, H. Z. H. (2025). Metacognitive reading strategies and their impact on comprehension: Insights from rural EFL learners. *Indonesian Journal on Learning and Advanced Education, 7*(1), 18–36. https://doi.org/10.23917/ijolae.v7i1.23908

Pardede, P., & Rafli, Z. (2023). Exploring Indonesian EFL learners' digital reading habits. *Journal of Language and Literature Studies, 7*, 459–479.

Putri, Z. F. S., & Damayanti, I. L. (2025). Pleasure reading, better understanding: A young EFL learner's journey in digital extensive reading. *Journal of Foreign Language Teaching and Learning, 10*(2), 153–181. https://doi.org/10.18196/ftl.v10i2.25269

Richards, J. C., & Schmidt, R. (2002). *Longman dictionary of language teaching and applied linguistics* (3rd ed.). Longman.

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.

Salsabila, H. A., Tri, W., & Apoko. (2025). *Indonesian Journal of Educational Development (IJED), 6*(1), 29–40.

Sugiyono. (2017). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.

Sutiyono, A., & Hastomo, T. (2022). The integration of DRTA strategy and the Zoom conference for teaching reading: An action research. *Aksara: Jurnal Bahasa dan Sastra, 23*(2), 57–66. https://doi.org/10.23960/aksara/v23i2.pp57-66

Ur, P. (1996). *A course in language teaching: Practice and theory*. Cambridge University Press.

Vassiliou, M., & Rowley, J. (2008). Progressing the definition of "e-book." *Library Hi Tech, 26*(3), 355–368.