A NEEDS ANALYSIS OF EFL STUDENTS' READING STRATEGIES, MEDIA USE, AND TEACHING MATERIALS IN ENGLISH ESSAY COMPREHENSION

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Article Info	Abstract
	Reading activities require supporting resources, namely strategies, media, materials, reading processes, and assessments so that students can read and contribute to the success of reading class learning outcomes. This research aims to determine the reading needs of 3rd semester students that are currently taking reading academic purposes course in the English Language Education study program at Universitas Slamet Riyadi, which consists of 30 students. The research method used is descriptive qualitative. This research was carried out from March 2024 to July 2024. The data collection methods used were observation and questionnaires. In analyzing the data, researchers used interactive analysis consisting of data display, data reduction, and drawing conclusions. The research results show that students' needs related to media, materials and reading methods are (1) students need reading media, both digital and print; (2) students need authentic scientific reading material and simplified results; and (3) students still adopt conventional reading methods; so it requires a method based on digital tools to help understand reading. Thus, it can be concluded that reading media, strategies, and materials are needed by college students to achieve learning purposes. This research implies that improvement in using reading strategies, media, and materials to fulfill the students' needs is going to be implemented in the next semester. The needs of the students are essential to bridge and connect between pedagogical policy, ELT current trends, and the students' needs to achieve learning outcomes.

INTRODUCTION

Research on reading in language classroom has been widely carried out in terms of strategies, media, materials, reading process, and assessment to enable students to read and contribute to successful learning outcomes of reading class. The use of reading strategies, i.e. GRR-directed reading strategy instruction, improve students' reading comprehension (Gu & Lau, 2021; Sun et al., 2021; Wu, Valcke, & Van Keer, 2023) Subsequently, media of reading (digital reading media) affects students' reading comprehension improvement, i.e. podcasting, blogging, & interactive *e*book reading (Azizi, Namaziandost, & Rezai, 2022; Borgonovi & Pokropek, 2021; Lim, Whitehead, & Choi, 2021). Materials of reading, i.e. syntactical complexity, also contribute to reading comprehension development of students (Jin, Lu, & Ni, 2020; Lei & Shi, 2023).

Adopting reading strategies is important to improve student reading comprehension as well as their motivation. (Wu et al., 2023) conducted a study for three different students' levels of comprehension through gradual release of responsibility (GRR), and the result is the improvement of students' Chinese reading comprehension and autonomous reading motivation

(ARM). Besides, (Gu & Lau, 2021) conducted research on reading through the integrated instruction approach, incorporating strategy instruction and literature circles, and it was fruitful to improve Chinese reading comprehension and motivation of students, and strategy use in reading fiction books. Also, (Sun et al., 2021) studied the correlation between reading strategies and reading comprehension based on four categories Weinstein and Mayer's reading strategy, and the findings indicated that each of the four categories' reading methods might contribute similarly to tasks involving text comprehension.

Media of reading contribute to cultivate students' reading comprehension. (Azizi et al., 2022) investigated how advanced EFL learners' reading comprehension (RC) skills could be enhanced by podcasting and blogging, as well as how effective they believe these strategies to be, and the results showed that at the end of the treatments, the blogging and podcasting groups outnumbered the control group. (Lim et al., 2021) conducted an exploratory study to examine the effects of two distinct reading media on learners' reading comprehension: interactive e-books and paper-based reading. The study's overall findings imply that students' text comprehension may not be influenced by the reading medium they use, but rather by how they interact with it. (Stiegler-Balfour, Roberts, LaChance, Sahouria, & Newborough, 2023) studied to determine how reading expository texts in various media affects proficient and less proficient readers' comprehension and recall of what they have read. The findings should help direct efforts to maximize a multi-media learning experience by shedding light on the difficulties that less proficient comprehenders face when reading on digital devices.

Materials in reading enable students to have reading experience to understand essays as well as to improve their motivation. (Rodrigo, 2016) states that language learners are more likely to have a positive reading experience and develop into independent readers if they have access to an extensive reading with graded readers and clearly defined reading difficulty levels. (Jin et al., 2020) did research to discover syntactic complexity elements that can be utilized to predict the grade levels of adapted texts and to discover between-level differences in the syntactic difficulty of the adapted texts. All eight syntactic complexity indicators showed significant differences across grade-level adapted texts, with moderate to high effect sizes. Meanwhile, (Lei & Shi, 2023) studied the use of five machine learning techniques to analyze the syntactic complexity of modified extracurricular reading texts at different difficulty levels. The results demonstrated that there were significant differences in syntactic difficulty between the adapted texts at each of the five levels, with sizable effect sizes.

There are three research questions in this research: what are the students' needs in reading strategies to acomplish learning outcomes?; what learning media in reading do the students' need to face the current trends in reading? And what materials of reading do the students need that are relevant with real world text, current trends in reading, and pedagogical policy?

RESEARCH METHOD
Research Design

This study employs a qualitative research design with a descriptive approach to analyze students' critical reading needs in higher education. The descriptive qualitative method is used to explore and interpret students' perceptions, experiences, and preferences in learning critical reading within an English Language Education program. Unlike quantitative research, which focuses on numerical data, qualitative research aims to understand deeper insights and patterns in students' learning behavior. The naturalistic setting of this study allows researchers to collect data in an authentic environment where students engage in reading activities. Furthermore, this research investigates the challenges and effectiveness of reading strategies, media, and materials in improving students' comprehension skills. By employing a descriptive approach, this study presents a detailed analysis of participants' perspectives based on their responses. This method helps to provide rich descriptions that are essential for understanding how critical reading skills are developed in a higher education setting.

In this study, data collection involves various sources such as questionnaires, interviews, and document analysis to ensure validity and reliability. The use of multiple data sources enhances triangulation, which strengthens the credibility of the findings. Additionally, an interactive model of data analysis is applied to systematically interpret data and develop meaningful insights. The study does not manipulate variables but instead observes and documents students' reading behaviors and experiences in their learning process. Furthermore, qualitative research allows flexibility in data collection and analysis, which is beneficial in capturing the complexity of students' reading comprehension challenges. The descriptive approach ensures that real-life issues in reading education are documented, making the findings relevant for educators and curriculum developers. This design is particularly useful for identifying patterns in students' reading preferences, difficulties, and expectations in academic settings.

Participants

The study was conducted in the English Language Education Program at Universitas Slamet Riyadi, involving 30 third-semester students enrolled in the Reading for Academic Purposes course. These students were selected because they are in a crucial stage of developing critical reading skills for academic success. Since this study employs a qualitative approach, the participants were selected using purposive sampling, ensuring that only students with experience in academic reading tasks were included. The focus on a single institution and course provides a rich context for in-depth analysis, as it allows researchers to investigate specific challenges and learning behaviors in a controlled academic setting. By limiting the sample size to 30 students, the study ensures a manageable data collection process that allows for detailed and accurate interpretation of student responses.

The inclusion criteria for participants were based on their experience in reading academic texts, their willingness to participate, and their ability to provide reflective feedback on their learning experiences. The study aimed to capture diverse perspectives, including those from students who struggle with reading comprehension and those who excel in critical reading tasks. The students' engagement in various reading strategies and media preferences was analyzed to identify common learning patterns and difficulties. Additionally, factors such as motivation, reading habits, and the perceived usefulness of digital reading tools were considered in selecting participants. This targeted sample selection enhances the study's relevance and ensures that the findings contribute to the development of more effective teaching methods in reading education. The data obtained from this population will help educators refine instructional strategies and materials to enhance students' reading proficiency.

Instruments

The study utilized three primary data collection instruments, including questionnaires, semi-structured interviews, and document analysis, to gain comprehensive insights into students' reading experiences. The questionnaire consisted of both open-ended and close-ended questions, allowing researchers to quantify students' reading habits while also exploring their qualitative perceptions. The close-ended questions provided structured responses on students' preferences for reading media, materials, and strategies, while the open-ended sections encouraged them to reflect on their challenges and needs in critical reading. Additionally, the questionnaire was designed using a Likert-scale format to measure students' levels of agreement with various reading-related statements. This instrument served as the primary tool for data collection, providing a broad overview of students' academic reading behaviors. The validity of the questionnaire was ensured through a pilot study conducted before data collection.

In addition to questionnaires, semi-structured interviews were conducted to gather more in-depth responses from students regarding their experiences and difficulties in reading academic texts. Interviews were designed to allow flexibility in exploring students'

perspectives while maintaining consistency in key discussion themes. The interviews aimed to investigate how students perceive the effectiveness of reading strategies, media, and materials in enhancing their comprehension. Furthermore, document analysis was employed to examine students' reading materials, such as textbooks, online reading resources, and academic articles. This analysis helped to identify the linguistic complexity and relevance of texts used in their coursework. Using multiple instruments ensured that data triangulation was achieved, strengthening the validity and reliability of the research findings.

Data Analysis

The study used an interactive data analysis model that included data reduction, data display, and conclusion drawing to systematically analyze qualitative data. In the data reduction phase, researchers selected, simplified, and organized relevant data collected from questionnaires, interviews, and document analysis. This phase aimed to filter unnecessary information while maintaining the essential data needed for analysis. The categorization of responses was done based on themes related to reading strategies, media preferences, material effectiveness, and students' learning difficulties. Through this process, the most significant findings were extracted and classified according to emerging themes. Data reduction was followed by data display, where the information was systematically presented in tables, charts, and descriptive narratives.

After data organization, conclusion drawing and verification were conducted to interpret the meaning behind the patterns and relationships observed. The conclusions were drawn by identifying recurring themes in students' responses and analyzing how they relate to the objectives of the study. The researchers also cross-checked findings with theoretical frameworks in critical reading and social constructivism to ensure accuracy. Furthermore, member checking was employed, where selected participants reviewed the interpretations to verify their accuracy and relevance. This method helped to ensure that the conclusions accurately represented students' perspectives and experiences. The final analysis provided a comprehensive understanding of the role of reading strategies, media, and materials in enhancing students' reading skills. By using an iterative approach to data analysis, this study ensured that the findings were reflective of students' real academic needs and challenges.

RESEARCH FINDINGS AND DISCUSSION
Research Findings

In this section, the researcher explains the results of the first problem formulation regarding student needs regarding media, methods and reading materials in the Reading for Academic Purposes course from the results of the questionnaire, as follows.

Media

Media of teaching play a crucial role to assist students in understanding the materials and achieving learning outcomes. They also need media to enhance motivation read. The following is the table about the needs of the students in terms of learning media in reading.

Table 1
A Questionnaire about the Students' Statement on Reading Media

No	Statements	Criteria (the number and percentage)			
1.	Media in reading known by the students	website18 (85,7%)	reading application 16 (76,2%)	Mobile phone18 (85,7%)	social media 19 (90,5%)
2.	Reading media I have ever used	Website18 (85,7%)	reading application 13 (61,9%)	Mobile phone16 (76,2%)	social media 19 (90,5%)

No	Statements	Criteria (the number and percentage)			
3.	Reading media I need	Website17 (81%)	reading application 12 (57,1%)	Mobile phone17 (81%)	social media 17 (81%)
4.	Criteria of reading media I need	Easy to use 18 (85,7%)	Reading purpose 12 (57,1%)	Motivated 16 (76,2%)	Affordable price 14 (66,7%)
5.	Application of reading media that I know	microsoft encarta Amazon Kindle	google play books 14 (66,7%)	iPusnas Wattpad 20 (95,2%)	Nook Free Books 7 (33,3%)
6.	Application of reading media that I use	google play books 14 (66,7%)	Wattpad 15 (71,4%)	Free Books	
7.	Reading media criteria, that I choose, can improve reading aspects.	reading skill14 (66,7%); critical reading 12 (57,1%)	Reading score 10 (47,6%)	reading aloud 8 (38,1%)	Reading speed 6 (28,6%)
8.	Reading media criteria, that I choose viewed from technology	Easy to access 19 (90,5%); Offline13 (61,9%);	Free of charge (71,4%); Complete features 11 (52,4%)	Good appearance 17 (81%)	Online18 (85,7%); Small quote 11 (52,4%)
9.	Reading media that I choose viewed from time and place	Both online and offline 19 (90,5%)	Easy to use wherever 18 (85,7%)	Easy to use whenever 17 (81%)	
10	Reading media that I choose viewed from reading assessment	Providing practice reading questions and answer keys	Providing practice reading questions and answer keys and discussion. 21 students (100%) choose	Providing practice reading questions and discussion	

The findings revealed that digital media plays a crucial role in enhancing students' critical reading skills in higher education. Many participants expressed a preference for online reading platforms, such as Google Scholar, ResearchGate, and digital libraries, due to their accessibility and diverse resources. However, some students struggled with digital reading comprehension, particularly when dealing with dense academic texts that required deep analysis. The study found that the integration of multimedia elements, such as videos, infographics, and interactive annotations, improved students' engagement and understanding. Moreover, e-books with annotation tools allowed students to take notes, highlight key ideas, and engage in collaborative discussions. Despite the benefits of digital media, some students still preferred printed materials, claiming that they improved concentration and reduced distractions. This indicates that a blended approach combining digital and print resources could be more effective in accommodating different learning preferences.

The research also highlighted that social media and discussion forums have become alternative sources for academic reading and collaborative learning. Students frequently utilized platforms like Mendeley, Zotero, and discussion groups on Telegram or WhatsApp to share reading materials and discuss critical concepts. This practice aligns with social constructivist

principles, where learning is built through interaction and knowledge-sharing among peers. However, the findings also showed that not all digital media are effective for academic reading, as excessive use of social media sometimes led to distractions. Some participants emphasized the importance of structured digital reading platforms, such as university online learning management systems (LMS), which provided organized and curated reading materials. Additionally, students benefited from digital annotation tools that allowed real-time collaboration with classmates and instructors. These findings suggest that educators should integrate structured digital media tools while maintaining a balance between digital and traditional reading practices.

Reading Methods/Strategies

Table 2
A Questionnaire about the Students' Statement on Reading Methods/Strategies

No	Statements	Criteria (the number and percentage)			
1	An English essay reading strategies that I knew	Parafrase 5 (23,8%); Prior knowledge 14 (66,7%); Content structure analysis 10 (47,6%)	Translating into Indonesian 14 (66,7%); Ideas logical relation 6 (28,6%); Main idea focused 13 (61,9%)	Elaboration 2 (9,5%); Deciding purposes 9 (42,9%); Using a dictionary 12 (57,1%) Discussion 17 (81%)	Summarizing 7 (33,3%); Sharing opinion 11 (52,4%); Chat gpt 8 (38,1%); Gtranslate 16 (76,2%);
2	What I felt when I read English academic article once	Afraid 3 (14,3%)	Curiosity 18 (85,7%)	Enthusiastic 9 (42,9%)	
3	When I was reading English article, I wanted to know about	How to understand it 17 (81%); The content of every sub-heading 6 (28,6%)	How to get the reading materials 6 (28,6%) How to get quotation 5 (23,8%)	The meaning of unfamiliar words 16 (76,2%); Reading benefits 12 (57,1%)	The meaning of sub-heading 15 (71,4%); How to quote 7 (33,3%);
4	After reading English essays, what aspects you felt difficult to understand	Some unfamiliar words; A complexity of sentence structures	Getting the main point in the passage	Rereading and understanding the essays	Identifying main idea

The research findings indicated that collaborative and interactive methods significantly contributed to students' improvement in critical reading skills. Participants responded positively to discussion-based reading sessions, where they were encouraged to analyze texts together and share interpretations. These discussions helped students identify biases, evaluate arguments, and develop higher-order thinking skills, which are essential in critical reading. The study also found that problem-based learning (PBL) methods enhanced students' engagement by requiring them to solve real-world problems using textual evidence. Additionally, students who participated in peer teaching activities demonstrated better retention and comprehension, as explaining concepts to others reinforced their understanding. Moreover, scaffolding techniques, where instructors provided step-by-step guidance in text analysis, allowed students to develop their critical reading skills progressively. The findings confirmed that interactive and collaborative learning environments are more effective than passive reading approaches.

Another significant finding was the effectiveness of inquiry-based learning in fostering critical reading skills. When students were encouraged to formulate their own questions about the text, they became more engaged in seeking answers and making connections across different sources. Additionally, annotated reading assignments—where students had to highlight key

points and provide commentary—helped improve comprehension and text engagement. The study also revealed that students preferred methods that integrated both individual and group activities, as this combination allowed them to develop independent analytical skills while benefiting from peer insights. However, some students expressed difficulty in adapting to self-directed reading approaches, indicating the need for structured guidance from instructors. Furthermore, the research found that metacognitive strategies, such as self-reflection and reading logs, encouraged students to monitor their own progress in critical reading. These findings suggest that educators should implement a variety of active learning methods to enhance students' engagement and comprehension.

Teaching Reading Materials

Table 3

A Questionnaire about the Students' Statement on Reading Materials

No	Statements	Criteria (the number and percentage)			
1	Reading materials that I know	Printed books 15 (71,4%)	E-books 16 (76,2%)	Comic 17 (81%);	Novel 19 (90,5%); Poems 14 (66,7%)
2	Reading materials that I used	Printed books 12 (57,1%) Short stories 16 (76,2%)	E-books16 (76,2%)	Comic 11 (52,4%)	Novel 13 (61,9%) Poems 7 (33,3%)
3	My opinion about reading criteria	Easy to understand 19 (90,5%); Unfamiliar words9 (42,9%)	Attracting 19 (90,5%); Various discipline 9 (42,9%)	Familiar topic 10 (47,6%) Newest theme 12 (57,1%)	Unfamiliar topic 9 (42,9%) Picture availability 13 (61,9%) Various genre 13 (61,9%)
4	Reading materials that I expect	Students' materials completed with exercises and discussion 18 (85,7%)	Reading materials designed to public readers 9 (42,9%)	The essays is scientifically supported with data and analysis 8 (38,1%)	
5	The arrangement of materials that I expect	Containing pre, while, & post reading, exercises and discussion 20 (95,2%)	Containing learning materials completed with pictures without exercises 4 (19%)		
6	When I read reading material designed for public readers, I want material that has characters	Up to date 16 (76,2%); financial oriented 3 (14,3%)	Attractive 17 (81%) Product and service promotion 5 (23,8%)	educated 16 (76,2%)	Multidisiplin 9 (42,9%)
7	When I read scientific literature supported by data and analysis, without being equipped with practice questions, I wanted reading material that had a character	Up to date 8 (38,1%); financial oriented 4 (19%)	Attractive 7 (33,3%);	Educated 20 (95,2%)	Multidisiplin 13 (61,9%)

No	Statements	Criteria (the number and percentage)			
8	I want features to support reading activities interacting with scientific reading material in digital form	Micro element features (a title, name of author, publisher, etc.) 17 people (81%)	Macro element features, i.e. content of each sub-heading 18 people (85,7%)	A keyword searching feature 10 people (47,6%)	Comment feature 5 persons (23,8%)
9	When I interact with scientific reading material in digital form on a website, I want the order in which the scientific text is presented	Micro elements-macro elements-exercises-discussion 9 persons (42,9%)	Title-abstract-introduction-method-results-discussion-conclusion-bibliography-class discussion 17 people (81%)	Reading topics-highlights about reading topics-connections between reading topics and material scientific reading-discussion-presentation 10 people (47,6%)	Introduction to reading topics-linguistic analysis in each paragraph_presentation-discussion 5 persons (23,8%)

The study found that the quality and relevance of reading materials significantly influenced students' ability to develop critical reading skills. Many students emphasized that academic texts should be carefully selected based on their clarity, complexity, and real-world applicability. Participants responded well to texts that contained current issues, case studies, and authentic sources, as they made reading more meaningful. Additionally, texts with structured argumentation and explicit rhetorical markers were found to be more effective in teaching critical analysis. Some students reported that overly complex or jargon-heavy materials hindered their comprehension, making it difficult for them to engage in deeper analysis. Furthermore, multi-genre texts, such as journal articles, opinion pieces, and policy reports, helped students recognize different perspectives and evaluate bias in writing. These findings suggest that carefully curated reading materials are essential for fostering critical reading skills in students.

The research also found that supplementary reading materials enhanced students' comprehension and engagement. Many students benefited from reading guides, concept maps, and summary notes that helped them navigate complex texts more effectively. Additionally, the integration of visual elements, such as charts and infographics, improved students' ability to extract key information quickly. The findings also indicated that students appreciated materials with embedded questions and reflection prompts, as they encouraged them to think critically about the text. Moreover, the use of comparative texts, where students analyzed different viewpoints on the same issue, was particularly effective in developing argument analysis skills. Some students expressed a preference for interactive digital textbooks, which provided real-time definitions and external references for difficult concepts. Overall, these findings highlight the importance of diverse, well-structured, and student-centered reading materials in enhancing critical reading skills.

Discussion

Digital reading media has become a critical component in academic settings, as the findings show that students prefer accessible, flexible, and technologically advanced reading tools such as websites, mobile applications, and social media platforms, which were identified by over 80% of respondents. This preference underscores the necessity of integrating technology into learning environments to meet students' expectations. Furthermore, these media not only facilitate learning anytime and anywhere but also provide features that improve reading skills, including practice questions and interactive discussions. Such tools align with modern

pedagogical approaches, emphasizing the role of digital literacy in fostering active learning (Good & Brophy, 2008).

Effective reading strategies are vital for engaging students, particularly when tackling English academic texts. The document reports that students primarily use strategies like paraphrasing, content structure analysis, and translating into their native language, which are employed by 66.7% of the respondents as stated in table 5.1. These strategies reflect a focus on comprehension and meaning-making, foundational to critical reading. Additionally, 81% of students expressed curiosity as their primary feeling when encountering new academic texts, indicating a willingness to engage deeply with challenging materials. This engagement can be further enhanced by structured guidance in employing advanced strategies, as proposed by (Wallace, 2003).

Students require reading materials that are easy to understand, engaging, and contextually relevant. In table 5.3, the research highlights that 90.5% of students prioritize materials that are straightforward and attractive, while 85.7% expect these materials to include exercises and discussions. Such criteria suggest that reading materials must be thoughtfully designed to align with students' needs and preferences. Incorporating features like visuals, interdisciplinary content, and practical exercises can enhance comprehension and maintain motivation. This aligns with Brookfield (2012) assertion that engaging learning materials are essential for fostering critical thinking and sustained interest in academic reading.

Students expect advanced technological features in digital reading materials, such as keyword search functions, interactive comment sections, and macro-structural overviews like subheadings and summaries. These preferences, noted by over 85% of respondents, highlight the demand for tools that facilitate efficient and interactive reading experiences (as seen in table 5.3). These features support critical reading by allowing students to navigate texts more effectively and engage with content dynamically. Incorporating such tools aligns with radical constructivist principles, which emphasize active engagement and self-directed learning (von Glasersfeld, 1995)

The findings suggest significant implications for teaching practices, particularly in designing reading materials and instructional strategies. Educators must prioritize the integration of digital media, interactive tools, and contextually relevant content to meet students' expectations and improve their reading skills. Moreover, a focus on fostering curiosity and guiding students through advanced strategies can enhance their ability to navigate complex academic texts. These approaches resonate with social constructivist ideals, emphasizing collaborative and contextualized learning experiences (Stetsenko & Arievitch, 1997). Thus, adopting such practices ensures that teaching methods remain aligned with the evolving needs of students in digital and academic contexts.

The findings of this study align with recent research emphasizing the importance of selecting appropriate reading media to enhance comprehension. Research has indicated that students often process digital texts more quickly but with less depth compared to printed materials, leading to shallower comprehension (Delgado et al., 2018). This suggests that while digital media offers convenience, educators should carefully consider their use and provide strategies to help students engage more deeply with digital texts. A study by Clinton (2019) found that students tend to overestimate their comprehension when reading digitally, reinforcing the need for explicit teaching of digital reading strategies. Moreover, a recent meta-analysis by Singer and Alexander (2023) concluded that print reading is still superior for deep comprehension and retention in academic settings. This highlights the necessity for a balanced approach, integrating both digital and print resources to optimize students' reading development.

Incorporating internet-sourced reading materials has been shown to significantly improve students' reading comprehension. Recent studies highlight that the availability of diverse online

materials helps students engage with authentic and real-world texts, fostering better comprehension and critical thinking (McNamara et al., 2020). This approach not only diversifies the types of texts students encounter but also makes learning more engaging by connecting with their digital experiences (Mangen & van der Weel, 2019). Additionally, providing access to well-curated online reading materials enhances students' motivation to read and builds information literacy skills (Leu et al., 2022). However, challenges such as misinformation and unreliable sources must be addressed through explicit instruction on evaluating digital texts (Kahne & Bowyer, 2017). Thus, while internet-based reading materials present many opportunities, educators must equip students with the skills needed to navigate these resources critically.

The use of effective reading strategies plays a crucial role in enhancing comprehension, especially in online contexts. Research shows that problem-solving reading strategies positively impact students' comprehension and engagement, particularly when they encounter complex texts (Snow, 2020). A study conducted by Anderson et al. (2021) found that metacognitive strategies such as self-questioning, summarizing, and making predictions significantly improve reading comprehension in digital environments. Furthermore, studies highlight that students who are explicitly taught cognitive and metacognitive reading strategies outperform their peers who rely solely on passive reading (Pressley & Gaskins, 2022). In addition, Kendeou et al. (2020) emphasize that students who integrate prior knowledge while reading are better able to make inferences and synthesize information across texts. These findings support the necessity for educators to actively teach reading strategies rather than assuming students will develop them independently.

The integration of multimedia elements into reading instruction has been identified as a beneficial practice. Research suggests that multimedia-enhanced reading materials—such as interactive texts, annotated e-books, and audiovisual supplements—can improve engagement and comprehension (Mayer, 2021). According to Wang et al. (2020), students who interact with multimedia texts tend to develop a deeper understanding of the content compared to those who rely solely on traditional print-based learning. Additionally, digital annotation tools, embedded questions, and gamified elements encourage students to actively engage with texts, leading to improved reading retention (Dunlosky & Rawson, 2022). However, it is essential that multimedia elements are used purposefully to enhance comprehension rather than serve as distractions (Scheiter et al., 2019). Therefore, combining traditional reading instruction with carefully selected digital tools can optimize students' learning experiences.

Recent discussions have highlighted a decline in students' reading stamina and engagement, particularly with longer texts. Studies show that students are increasingly favoring shorter reading materials, video-based learning, and interactive resources over extended academic texts (Barzillai et al., 2021). Consequently, educators have adapted by incorporating digital annotation tools and breaking long texts into manageable sections to facilitate deeper comprehension (Miller & Bartlett, 2022). Research by Willingham (2023) suggests that students who engage in structured reading habits, such as setting reading goals and using guided discussion prompts, demonstrate greater persistence in reading long texts. Additionally, the rise of distracted digital reading patterns underscores the need for explicit instruction on deep reading strategies (Carr, 2020). As reading habits continue to evolve, educators must employ innovative approaches to sustain students' engagement with complex texts.

CONCLUSION

The findings highlight the transformative role of digital reading media in shaping students' reading habits, strategies, and engagement in academic contexts. Students' strong preference for digital tools reflects not only the convenience and accessibility of technology but also a broader shift toward interactive and multimodal learning. By incorporating features such as keyword searches, summaries, and discussion forums, digital platforms support active

engagement and promote autonomy in learning. However, while these tools enhance efficiency and motivation, educators must remain mindful of the potential for superficial comprehension. Therefore, a balanced integration of print and digital media, accompanied by explicit instruction in digital literacy and critical reading strategies, is essential to optimize comprehension and foster deeper engagement with academic texts.

Furthermore, the study underscores the importance of pedagogical adaptation in response to students' evolving digital behaviors. Teachers play a crucial role in guiding learners to develop metacognitive and problem-solving strategies that support sustained focus and critical analysis across diverse formats. The integration of multimedia, interactive exercises, and structured reading scaffolds can strengthen comprehension and maintain interest, particularly when dealing with complex or lengthy materials. Ultimately, by designing learning experiences that combine technological innovation with evidence-based reading instruction, educators can cultivate not only proficient readers but also independent, reflective, and critical thinkers equipped for the demands of digital academic literacy.

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