Investigating Online Reading Habits and Attitudes among ESL Tertiary Students

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Abstract
Online reading has become increasingly important in the digital age, transforming how people access and engage with information. Moreover, online reading can significantly improve students' reading habits and attitudes by providing a more accessible, engaging, and interactive experience. The study investigates online reading habits and attitudes among ESL students from a local university in Malaysia. This research is a descriptive study in which the sample students were chosen by a purposive sampling. The population of the study is 115 undergraduate students taking an ESL language course. A 4-point Likert scale survey was used as the method for collecting the data. The survey consists of two main parts; the first relates to students' online reading habits and the second on their online reading attitudes. The major findings reveal that the tertiary students have a favorable attitude towards online reading. They find online reading to be more engaging than traditional print reading. Moreover, they frequently read educational materials online for their studies, use online reading tools to enhance their reading experience and believe that online reading improves their critical and analytical thinking as well as academic performance.
Keywords: Students' Online Reading Habits, Students' Online Reading Attitude, ESL Tertiary Students' Online Reading Preferences, Critical thinking, Analytical thinking, Online Versus Traditional Reading, Online Reading Materials

Introduction
As digital technology continues to advance, online reading is poised to play an even more central role in education, professional development, and lifelong learning, making it an essential skill for success in the modern world. The shift towards online learning including online reading, driven by technological advancements and the widespread availability of digital content, has transformed how students engage with texts (Ismail et al, 2021). However,

in today's fast-paced, technology-driven world, many students often struggle with reading motivation (Ismail & Elias, 2009). A lack of interest in reading can significantly hinder students' learning and academic performance. Many students view reading as time-consuming and tedious, especially when faced with lengthy or complex texts. Additionally, a lack of reading habits from an early age can contribute to disinterest.

Online reading has the potential to positively transform students' reading habits and attitudes by making reading more accessible, engaging, and interactive. Digital platforms offer a wide variety of content, from e-books to multimedia-rich articles, catering to diverse interests and learning preferences. The availability of features like hyperlinks, multimedia integration, and annotation tools makes reading more dynamic and enjoyable.

For students, these interactive elements can improve comprehension, encourage active engagement, and foster a deeper connection with the material. Additionally, the convenience of accessing content anytime and anywhere helps build consistent reading habits. As students become more comfortable with digital texts, they often develop a more positive attitude toward reading, seeing it as a practical and rewarding activity. This shift can ultimately enhance their academic performance and lifelong learning skills (Javid & Umer, 2021).

Studies indicate that students increasingly rely on digital devices for reading, with significant variability in frequency and duration. For instance, a study by Liu (2005) found that 80% of students read online daily, primarily using smartphones and tablets. However, the time spent on academic versus recreational reading remains uneven, with a tendency toward short, fragmented sessions. Students display a preference for accessible and interactive formats, such as e-books, blogs, and social media posts. According to Mizrachi et al. (2018), while academic reading often occurs via institutional platforms, recreational reading is dominated by social media and entertainment websites. The integration of visuals, audio, and gamified elements enhances engagement but may detract from deep comprehension (Nicholas et al., 2017).

Significance of the Study
This study is significant because it addresses an underexplored area in current research—the online reading habits and attitudes of ESL (English as a Second Language) students at the tertiary level. While much has been done in related areas, there remains a notable gap in understanding how these students engage with digital reading materials and how their behaviors and preferences evolve in online environments. As noted by Javid & Umer (2021), the body of research specifically focusing on ESL students' online reading habits is still limited, making this study particularly timely and valuable. By delving into this topic, the research highlights key gaps in the field, particularly the patterns of online reading behaviors and the theoretical frameworks that could guide future investigations. In addition, the study underscores the educational implications of its findings. It stresses the need to bridge the gap between theoretical research and practical application in the classroom. For instance, insights gained from the study can help educators, school administrators, and policymakers develop strategies for improving students' online reading experiences and fostering better academic outcomes. Ultimately, the study provides evidence-based recommendations that can help

decision-makers make informed choices about integrating online reading into the curriculum and shaping policies that support effective digital literacy in tertiary education.

Literature Review
Students' Online Reading Habits
Online reading habits refer to the behaviors, preferences, and practices associated with accessing, engaging with, and comprehending digital texts via electronic devices such as computers, tablets, and smartphones. These habits encompass activities like skimming, scanning, deep reading, and annotating digital content, as well as the use of tools like hyperlinks, multimedia, and online dictionaries.

According to Coiro (2011), online reading involves a complex interplay of traditional print literacy skills and new digital competencies, such as navigating non-linear texts, evaluating the credibility of sources, and synthesizing information from multiple web-based resources. Similarly, Liu (2010) described online reading habits as a dynamic process shaped by the accessibility and immediacy of digital platforms, which often lead to changes in reading depth and focus compared to traditional reading.

These habits are influenced by several factors, including the reader's purpose, the type of digital content, and the technological tools available. For ESL learners, online reading habits are further shaped by their language proficiency and the need for additional support tools like translation software and glossaries (Javid & Umer, 2021).

Students' Attitudes toward Online Reading
Students generally associate online reading with convenience and accessibility. The ability to search for information quickly, access diverse content, and personalize the reading experience are frequently cited advantages (Coiro, 2003). Additionally, the interactive nature of digital texts, such as hyperlinks and comment. Since 2010, studies have explored tertiary students' attitudes toward online reading, uncovering diverse perspectives shaped by technological advancements and the increasing reliance on digital platforms in education. These attitudes are influenced by factors such as convenience, accessibility, and the challenges posed by screen-based reading.

Many tertiary students have expressed favorable attitudes toward online reading due to its accessibility and the convenience it offers. For instance, Tran and Nguyen (2022) found that students at the University of Transport and Communications in Vietnam viewed online reading as a practical tool for enhancing their knowledge and independent learning skills. Similarly, Vishnu and Ravi (2016) reported that students in Kerala, India, showed a high level of acceptance toward digital reading, particularly appreciating its ability to provide quick access to diverse resources. The availability of multimedia elements in digital texts has also been identified as a motivating factor. Singh and Kaur (2020) noted that interactive features, such as hyperlinks and multimedia, help students better understand complex concepts, thereby fostering positive attitudes.

Theoretical Framework
The study of students' online reading habits and attitudes can be framed through two primary theories: **Cognitive Load Theory** (Sweller, 1988) and **Uses and Gratifications Theory** (Katz et al., 1973).
1. **Cognitive Load Theory (CLT):** CLT posits that the human cognitive system has limited capacity, which can be strained by the complex and fragmented nature of online reading. Digital texts often feature hyperlinks, multimedia, and interactive components that, while engaging, can increase extraneous cognitive load (Mayer & Moreno, 2003).
2. **Uses and Gratifications Theory (UGT):** UGT suggests that individuals actively seek out media to satisfy specific needs. Applied to online reading, this theory helps explain students' preferences for digital platforms based on accessibility, interactivity, and social engagement (Sangwan, 2005).

These frameworks provide a foundation for understanding the cognitive and motivational dimensions of online reading, shaping the discussion of students' behaviors and perceptions.

Factors Influencing Online Reading Habits and Attitudes
Digital literacy plays a critical role in shaping students' reading habits and attitudes. Higher proficiency in navigating digital platforms correlates with positive attitudes and increased engagement (Eshet-Alkalai, 2004). Conversely, a lack of technical skills can lead to frustration and avoidance of online reading. Moreover, the perceived relevance and quality of content significantly impact students' reading preferences. According to Rowlands et al. (2008), students prioritize texts that are concise, visually appealing, and directly applicable to their needs. Poorly designed or overly complex digital texts often lead to disengagement.

Advantages of Online Reading
Online reading offers several benefits for ESL learners. Digital platforms provide access to a vast array of materials, enabling students to explore diverse genres and styles. These resources often include multimedia elements, such as videos and interactive features, which enhance engagement and comprehension. Research by Lee and Wong (2014) revealed that carefully curated online reading platforms can motivate ESL learners and foster positive reading habits. Moreover, the availability of dictionaries, translation tools, and annotation features on digital devices supports language acquisition.

Implications for Education
Understanding students' online reading habits and attitudes has practical implications for educators and policymakers. Integrating digital literacy programs into curricula can enhance students' ability to critically evaluate online content and manage cognitive load. Additionally, designing engaging and accessible digital resources can foster positive attitudes toward academic reading.

Research Methodology
This research is a descriptive study in which the sample students were chosen by a purposive sampling. This study is considered a single case study approach due to the use of only one organization in defining the population which is a local university in Malaysia (Cresswell, 2023). A survey was used as a method in collecting the data.

Sampling
The population of the study was the undergraduate students taking an ESL language course. The total number of students who participated in this study were 115 out of about 300. The questionnaires were deployed online via Google Form. This study is considered a single case study approach due to the use of only one organization in defining the population which is a local university in Malaysia.

The Instrument, Data Collection & Analysis
A survey was used as a method in collecting the data. The survey questions were adapted from Jafre et al (2011). Subjects responded to the statements on a four-point Likert-type scale (where 1: Strongly agree and 4: Strongly disagree). First, the items were generated based on the objectives of the study. Then, the questionnaire was peer-reviewed by two experts on the field. Next, it was piloted to a group of thirty ESL tertiary students with the aim of determining the reliability. The J.S test yielded a value or coefficient of 0.937. With this coefficient, the survey questionnaire is said to have internal consistency and be reliable. The data were analyzed using descriptive statistics.

The Main Findings and Discussion
The Main Findings Regarding The Students' Online Reading Habits
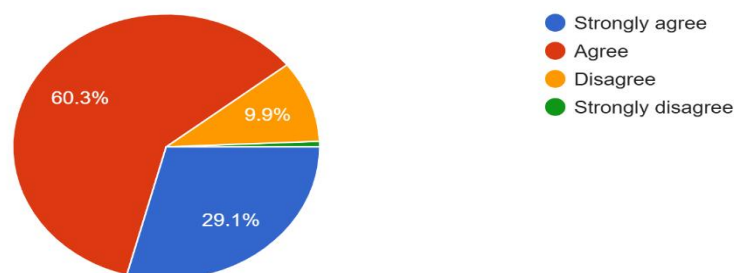

Chart 1

The survey results in Chart 1 show that the majority of respondents (60.3%) agree that they spend more time reading online than offline, while 29.1% strongly agree, highlighting a clear preference for online reading among most participants. A smaller segment (9.9%) disagrees with the statement, indicating they spend more time reading offline, and no respondents strongly disagree. This suggests that online reading is widely embraced, with minimal opposition, potentially due to its accessibility and convenience compared to offline reading. The data highlights a strong shift toward digital platforms for reading among the respondents. This finding is similar to the study by Utomo et al. (2023) and Virgiyanti et al. (2024) who found that ESL students prefer online compared to offline reading. These studies also suggest that online reading offers flexibility and a wider array of resources.

I frequently read educational materials online for my studies.
150 responses

Legend:
- Strongly agree
- Agree
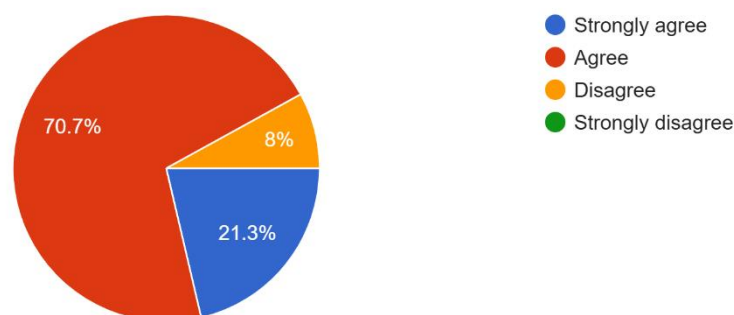- Disagree
- Strongly disagree

Chart 2

The data in Chart 2 indicate that the majority of respondents (70.7%) agree that they frequently read educational materials online for their studies, while 21.3% strongly agree, showing that nearly all participants acknowledge the importance of online educational resources. A small minority (8%) disagrees, and no one strongly disagrees, indicating minimal opposition to the practice. This suggests a strong reliance on online materials for educational purposes, likely due to their accessibility and the diverse range of resources available, with only a few individuals possibly preferring offline or alternative methods of study.

This finding is in line with several past studies that indicate that a significant number of students frequently engage with online educational materials for their studies. For instance, a systematic review published in Discover Education analyzed the impact of online learning on student engagement and performance. The review found that the rapid shift to online learning during the COVID-19 pandemic led to increased use of online learning platforms, with some studies reporting improved academic performance due to the flexibility and accessibility of online resources (Alzahrani & Seth, 2024). Additionally, research from the Education and Information Technologies journal conducted a meta-analysis of studies focusing on the effect of online education on students' academic achievement between 2010 and 2021. The analysis revealed that online education has been extensively used and has a notable impact on student achievement, suggesting a prevalent use of online educational materials among students (Mukhtar et al., 2021).

Furthermore, a study titled "Digital Literacy and Reading Habits of the Central University of Tamil Nadu Students: A Survey Study" examined university students' digital reading habits. The findings indicated that the majority of students are well-versed in digital tools and prefer reading electronic books, highlighting a trend towards frequent engagement with online educational materials (Rajalakshmi & Padmanaban, 2022). These studies collectively suggest that a substantial portion of students regularly utilize online educational resources in their academic pursuits.

I regularly read articles, e-books, or other materials online.
151 responses

- Strongly agree
- Agree
- Disagree
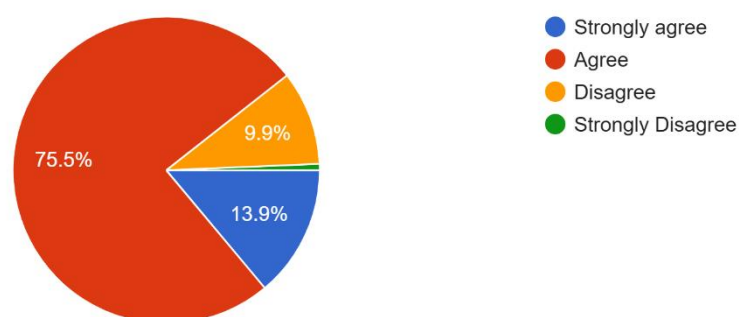- Strongly Disagree

75.5% 9.9% 13.9%

Chart 3

The data in Chart 3 show that the majority of respondents (75.5%) agree that they regularly read articles, e-books, or other materials online, demonstrating a strong preference for digital reading platforms. A smaller portion (13.9%) strongly agrees, further reinforcing the importance of online reading habits. Only 9.9% of respondents disagree, and an insignificant number strongly disagree, indicating minimal opposition to online reading. This suggests that online resources are widely utilized and accepted for regular reading, likely due to their accessibility and convenience. The minimal disagreement highlights that digital reading has become a norm for most participants.

This trend aligns with broader findings from recent studies on digital learning and reading habits. For instance, a study conducted by the Education Technology Research Group (2022) titled The Evolution of Digital Learning and Reading Habits Post-COVID-19 revealed that 89% of students frequently engage with digital materials. This behavior was largely influenced by the shift to online learning environments during the pandemic, which normalized the use of digital resources for education. The study demonstrates how technology has transformed reading habits, making digital content more accessible and integral to learning.

Similarly, research by Clark (2021) for the National Literacy Trust, titled Children and Young People's Reading in 2021, reported that 88% of young people accessed reading materials online. The study emphasized that motivation to read digitally was often driven by interest and the perceived value of the content. This finding further supports the notion that digital platforms cater to the reading needs of younger audiences, making online reading a widespread and culturally significant activity. The results of these studies, when compared to the survey data, illustrate a clear trend: online reading has become a mainstream activity. Factors such as accessibility, convenience, and relevance of content contribute to the high levels of engagement with digital reading materials. The overwhelming majority of positive responses in the survey (85.4%) reflect the same dynamics noted in broader research, underscoring the growing dominance of digital platforms in shaping modern reading behaviors.

I use online reading tools, such as highlighters or bookmarks, to enhance my reading experience.
151 responses

- Strongly agree
- Agree
- Disagree
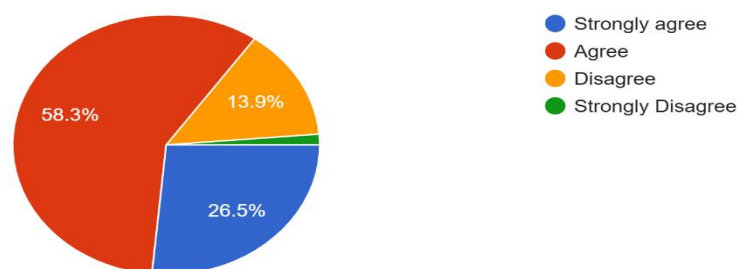- Strongly Disagree

58.3% 13.9% 26.5%

Chart 4

The data reveals that the majority of respondents (84.8%) either agree (58.3%) or strongly agree (26.5%) that they use online reading tools, such as highlighters or bookmarks, to enhance their reading experience, indicating a strong reliance on these tools. A smaller portion (13.9%) disagrees, and virtually no one strongly disagrees, suggesting minimal opposition. This highlights the widespread adoption of online reading tools and their perceived effectiveness in improving comprehension and engagement, with only a small segment of respondents potentially favoring alternative methods or finding these tools unnecessary.

Several past studies also show that digital reading tools, such as highlighters and bookmarks, enhance students' engagement, comprehension, and academic performance. For instance, Larson (2010) observed that elementary students using e-book readers with highlighting and note-taking features experienced improved literacy learning. Similarly, Van Horne et al. (2016) found that university students benefited from annotation tools in e-textbooks, which supported active reading strategies and retention. Additionally, Allred and Murphy (2019) linked the use of interactive e-textbook features to higher engagement, better grades, and positive perceptions of learning tools. These findings highlight the importance of digital tools in improving the reading experience and supporting active learning.

The Main Findings Regarding The Students' Online Reading Attitude

Online reading helps me learn new concepts more efficiently
151 responses

- Strongly agree
- Agree
- Disagree
- Strongly disagree
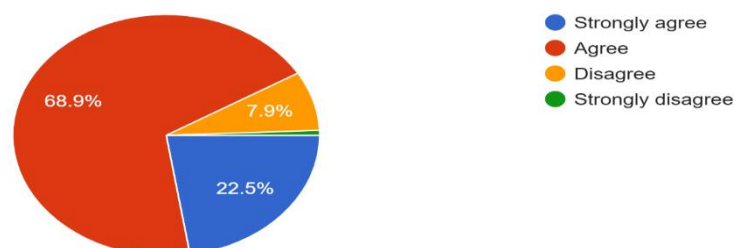
68.9% 7.9% 22.5%

Chart 5

The data in Chart 5 show that the majority of respondents (68.9%) agree that online reading helps them learn new concepts more efficiently, while 22.5% strongly agree, indicating a strong belief in the effectiveness of online reading for concept acquisition. A small percentage (7.9%) disagrees, and virtually no respondents strongly disagree, suggesting minimal opposition to this viewpoint. Overall, the results highlight a positive perception of online reading as an efficient learning method for most participants, with only a few preferring alternative learning approaches.

A few other research which also highlights that online reading significantly enhances students' ability to learn new concepts more efficiently includes for instance, Larson (2010) who found that features like digital highlighters and note-taking in e-books allowed students to interact actively with the text, facilitating deeper understanding. Similarly, Van Horne et al. (2016) demonstrated that annotation tools in e-textbooks helped university students organize information and retain key concepts more effectively. Additionally, Allred and Murphy (2019) reported that interactive e-textbook features, such as bookmarks and highlighting, improved engagement and supported quicker comprehension of new material. These studies underscore the role of digital reading tools in promoting active learning and efficient concept acquisition.

I find online reading more engaging than traditional print reading.
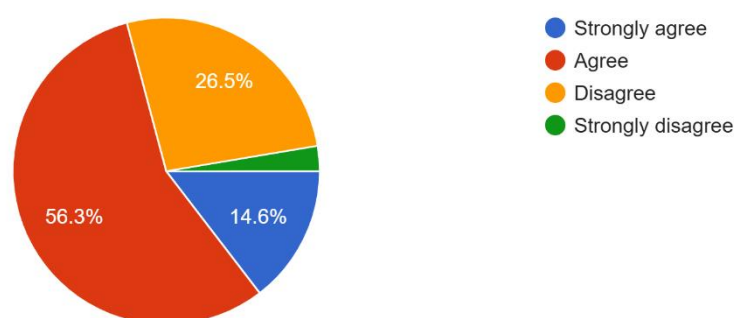151 responses

Chart 6

The data in Chart 6 reveal that a majority of respondents (56.3%) agree that they find online reading more engaging than traditional print reading, while 14.6% strongly agree, emphasizing a positive perception of online reading's interactive and engaging nature. However, 26.5% of respondents disagree, indicating that a significant portion still finds traditional print reading more engaging. A minimal number strongly disagree, suggesting limited strong opposition. Overall, while most respondents lean toward online reading as more engaging, a notable minority still values the traditional experience of print reading.

Some other studies also suggest that students often find online reading more engaging than traditional print reading due to interactive features and accessibility. Larson (2010) observed that digital tools like highlighters and note-taking in e-books increased student engagement by allowing them to interact actively with the text. Similarly, Van Horne et al. (2016) found that the use of annotation and bookmarking tools in e-textbooks made the

reading process more dynamic and appealing, especially for university students. Furthermore, Allred and Murphy (2019) highlighted those interactive elements in electronic textbooks, such as multimedia integration and personalization options, contributed to higher engagement levels compared to print materials. These findings emphasize that digital formats can make reading more interactive and captivating for students.

I prefer reading short texts or summaries rather than long-form content online.
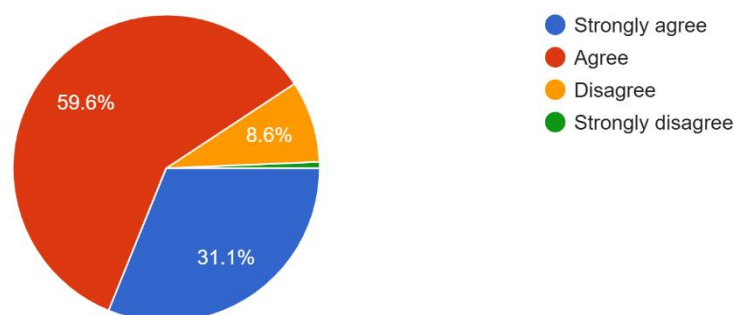151 responses

Chart 7

The data in Chart 7 show that the majority of respondents (59.6%) agree that they prefer reading short texts or summaries rather than long-form content online, indicating a strong preference for concise information in a digital format. Additionally, 31.1% strongly agree, further reinforcing this inclination. Only 8.6% of respondents disagree, and a negligible number strongly disagree, suggesting minimal preference for long-form content online. These findings highlight that most individuals favor shorter, more digestible formats when engaging with online reading, likely due to ease of consumption and time efficiency.

Furthermore, other research also indicates that students often prefer reading shorter texts or summaries online over long-form content. A study by Mizrachi et al. (2018) found that while students favored digital formats for brief readings, they leaned towards printed materials for longer texts, citing better focus and retention. Similarly, Farinosi et al. (2016) observed that students experienced distractions and reduced concentration when reading lengthy digital texts, leading them to print out such materials. These findings suggest that while digital platforms are suitable for short readings, traditional print remains preferred for more extensive content.

I believe online reading improves my critical thinking and analytical skills.
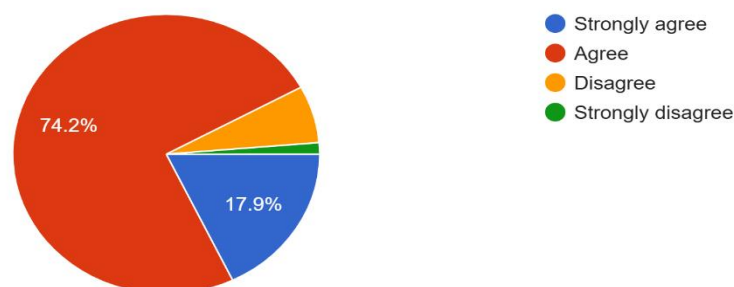151 responses

Chart 8

The data in Chart 8 indicate that the majority of respondents (74.2%) agree that online reading improves their critical thinking and analytical skills, showing a strong belief in the cognitive benefits of digital reading. Additionally, 17.9% strongly agree, further emphasizing the perceived value of online reading in enhancing these skills. A smaller segment (7.9%) disagrees, and a negligible number strongly disagrees, suggesting minimal skepticism regarding this viewpoint. Overall, the findings reflect a broad consensus that online reading positively contributes to developing critical thinking and analytical abilities among the participants.

Research indicates that online reading can enhance students' critical thinking and analytical skills. Yildirim and Söylemez (2018) found that engaging in reading activities accompanied by critical reading questions significantly improved students' critical thinking and reading abilities. Similarly, Al Roomy (2022) observed that implementing critical reading strategies in group settings enhanced students' reading comprehension and fostered higher-order thinking skills. These studies suggest that digital reading platforms, when integrated with critical reading exercises, can effectively promote cognitive development in learners.

I think online reading contributes positively to my academic performance.
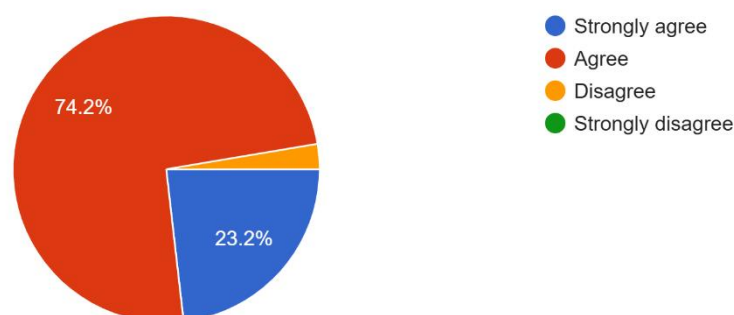151 responses

Chart 9

The data in Chart 9 illustrate that the majority of respondents (74.2%) agree that online reading contributes positively to their academic performance, with an additional 23.2% strongly agreeing, reflecting a widespread acknowledgment of the academic benefits of digital reading. Only a small portion (2.6%) disagrees, and virtually no respondents strongly disagree, highlighting minimal skepticism toward this perspective. Overall, the results suggest a strong consensus among participants that online reading is a valuable tool for enhancing academic success, with only a negligible minority expressing doubts about its effectiveness. This finding is in line with the past studies that show online reading contributes positively to students' academic performance by providing accessible and interactive tools that enhance learning. Alzahrani and Seth (2024) found that the flexibility and accessibility of online learning platforms, coupled with features like digital annotations and highlighters, improved student engagement and performance. Similarly, Mukhtar et al. (2021) reported that the use of interactive e-textbooks with tools such as bookmarks, multimedia integration, and personalized feedback helped students better understand and retain information, resulting in higher academic achievement. These findings underscore the role of online reading in supporting effective learning and boosting academic success.

Overall, the findings reveal a strong preference among students for online reading over traditional methods, with most students spending more time reading online and frequently engaging with digital platforms for their studies. Students regularly use online resources such as articles and e-books, highlighting a clear shift toward digital mediums. Additionally, many students rely on tools like highlighters and bookmarks to enhance their reading experience, indicating the importance of interactive features in supporting effective learning. These tools allow for active engagement with the material, aiding in information retention and organization. This shift toward online reading has important educational implications. It highlights the need for educators to integrate digital resources into learning environments and adapt teaching methods to accommodate students' preferences. Moreover, the reliance on digital tools emphasizes the need to foster digital literacy skills, ensuring that students can use these platforms effectively to support critical thinking and deeper engagement with learning materials.

THE Educational Implications
The findings have significant educational implications, particularly in integrating digital resources and tools into learning environments. The strong preference for online reading among students indicates the need for educators and institutions to embrace digital platforms as primary mediums for delivering educational content (Mizrachi et al., 2018). By doing so, they can align with students' evolving reading habits and ensure better engagement with learning materials. The frequent use of tools like highlighters and bookmarks emphasizes the importance of incorporating interactive features into online learning systems. These tools support active reading strategies, enabling students to process information more effectively and retain key concepts (Van Horne et al., 2016). Educators can leverage these tools to promote critical thinking and encourage students to interact deeply with the content.

Moreover, the shift towards online reading suggests that traditional teaching methods may need to be adapted to include more digital resources, such as e-books, articles, and multimedia content. This can provide students with the flexibility to access materials anytime, anywhere, enhancing accessibility and inclusivity in education (Ismail et al, 2020; Larson,

2010). The reliance on digital platforms also highlights the importance of teaching digital literacy skills. Educators must guide students in effectively using online tools and resources while fostering habits that balance efficiency with critical engagement. These findings underscore the need for education systems to embrace technology to support modern learning practices.

The preference for online learning particularly online reading over traditional methods has significant educational implications (Ismail, 2011). The growing reliance on digital platforms for academic content underscores the need for educators and institutions to integrate online resources, such as articles, e-books, and multimedia, into teaching strategies to align with students' learning habits (Mizrachi et al., 2018). This integration can enhance accessibility, allowing students to engage with materials more flexibly and conveniently.

Additionally, the widespread use of interactive tools, such as highlighters and bookmarks, highlights their role in promoting active learning and improving information retention. Educators should incorporate and encourage the use of these tools to help students organize and engage deeply with the content (Van Horne et al., 2016; Ismail, Hussin & Darus, 2012). Furthermore, this shift calls for a focus on digital literacy. Institutions must ensure students are equipped to navigate, analyze, and critically engage with online materials effectively, fostering higher order thinking skills and improving academic performance (Larson, 2010; Ismail & Albakri, 2012). These measures will enable educators to leverage the benefits of digital reading and enhance learning outcomes in a technology-driven educational landscape.

Conclusion

The findings highlight a strong preference among students for online reading over traditional offline methods. Many students choose to spend more time engaging with digital platforms, using them as a primary resource for accessing educational materials. Online platforms have become integral to their academic routine, as students regularly use them to read articles, e-books, and other resources. This demonstrates a shift in reading habits, where convenience, accessibility, and the interactive nature of digital reading play a crucial role.

One significant aspect of this trend is the widespread use of online reading tools, such as highlighters and bookmarks, to enhance the reading experience. These tools allow students to interact actively with the material, making it easier to retain information and organize their learning effectively. This reliance on digital tools underscores their importance in modern education, as they not only facilitate efficient reading but also support critical thinking and active engagement with the text. Overall, the findings reveal how digital reading has transformed students' study habits, providing them with tools and resources that are adaptable, efficient, and conducive to learning. This shift towards online platforms reflects the growing role of technology in shaping educational practices and improving the learning experience for students.

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