

# Online Reading Strategies and Difficulties in Thesis Writing of College Students in Davao City

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Abstract. This study aimed to determine which domain of online reading strategies significantly influences difficulties in thesis writing among college students in Davao City. A quantitative, non-experimental descriptive-correlational design was employed, using regression analysis to identify predictive relationships and Pearson correlation to measure the strength of association between variables. The study involved 203 randomly selected college students enrolled during the 2024–2025 academic year. A modified questionnaire, validated by field experts and tested for reliability, served as the primary data collection tool. Findings revealed that students demonstrated a very high level of online reading strategy use, yet still reported high levels of difficulty in thesis writing. A moderate, significant correlation was found between the two variables, with regression results indicating that support strategies—such as note-taking, seeking help, and using reference materials—were the only domain with a significant influence on reducing thesis writing challenges. Other domains showed limited impact, possibly due to their more general cognitive focus, which may not directly address the demands of academic writing. These results underscore the need for higher education institutions to promote targeted support programs, including writing workshops, peer mentoring, and digital literacy training. Such initiatives not only improve academic performance but also align with Sustainable Development Goal 4: Quality Education by fostering inclusive, equitable, and empowering learning environments that prepare students for lifelong academic and professional success.

Keywords: College students; Thesis writing; Online reading strategies.

## 1.0 Introduction

A thesis is a written study that results from a research process guided by a supervisor (Ermiati et al., 2021). It is widely regarded as one of the most challenging aspects of completing an undergraduate degree (Subia et al., 2022), often being a key requirement for graduation in many academic programs (Ballena & Liwag, 2019). In Indonesia, a study found that 92% of students faced difficulties with their thesis writing, with only 8% reporting no issues (Macayan et al., 2018). Similarly, another study found that 82% of students struggled with thesis writing due to personality issues, 83% due to sociocultural factors, and 86% due to linguistic challenges, showing the significant personal, sociocultural, and linguistic challenges students face (Puspita, 2019).

In addressing these challenges, reading strategies have been identified as essential tools that support students in gathering information and generating ideas, critical components of academic success (Sasalia & Sari, 2020). Reading proficiency, developed from early learning experiences, lays the foundation for academic achievement and broader social participation (Hu & Wang, 2019). Moreover, reading enables individuals to acquire the knowledge necessary for interpreting and responding to the world around them (Ahmed, 2021). In today's digital

age, the adoption of online reading strategies has become increasingly important. These strategies enhance students' comprehension and analytical thinking, which in turn lead to more coherent and well-organized thesis writing (Birgisdottir et al., 2020; Horowitz-Kraus et al., 2024).

The integration of technology into educational practices has further highlighted the relationship between online reading strategies and thesis writing difficulties. With tools such as word processors and digital communication platforms reshaping how students approach academic writing, those who engage actively with online reading strategies are more capable of understanding complex texts and structuring their academic work effectively (Abeeleh & Al-Sobh, 2021). Thus, the strategic use of online reading methods plays a vital role in addressing thesis writing challenges. When incorporated into instructional practices, these strategies can help streamline the writing process and improve academic outcomes (Astutik et al., 2024).

This study is anchored in three major theoretical frameworks—Metacognitive Theory, Cognitive Load Theory (CLT), and Self-Regulated Learning Theory—which together explain how reading strategies can mitigate thesis writing difficulties. Metacognitive Theory, as proposed by Flavell (1979), emphasizes students' awareness and regulation of their cognitive processes. It enables them to plan, monitor, and adjust their reading behaviors. Global strategies such as setting purposes for reading, recognizing text structures, and synthesizing content align closely with this theory. Empirical evidence supports that metacognitively aware students are more successful in academic tasks due to their capacity to reflect on and adapt their reading and writing strategies (Sultana et al., 2025). In parallel, Cognitive Load Theory (CLT) provides insight into how students can reduce mental strain when processing dense academic texts. This theory posits that excessive cognitive demand hinders learning, particularly when working with complex online material (Raoofi et al., 2017). Employing problem-solving strategies—such as rereading, simplifying content, or modifying reading techniques—can help manage this load. These approaches enable students to focus on relevant information, thereby reducing the burden associated with thesis writing and enhancing their performance (Temur et al., 2020).

Complementing these perspectives, Self-Regulated Learning Theory highlights how students can take initiative in their learning processes. Through goal setting, progress monitoring, and the use of support mechanisms like peer feedback or digital tools, learners can overcome academic hurdles (Zimmerman, 1990). This self-regulation reinforces metacognitive practices, contributing to more effective thesis writing. Findings from Subramanian et al. (2024) reveal that students who utilize support strategies and practice self-regulation tend to experience fewer academic difficulties, particularly in English as a Second Language (ESL) contexts. Despite these theoretical insights, a research gap persists. Much of the existing literature on reading strategies focuses on younger learners, providing a limited understanding of their application in higher education, particularly among English as a Foreign Language (EFL) students (Barikzai et al., 2025). While some studies have explored online reading behavior and its influence on comprehension, few have investigated its direct impact on the complex skill of thesis writing (Dell'Andrea, 2024). In many cases, online reading is associated with superficial engagement, which does not promote the deep processing required for academic writing (Hosseini-Zarrabi, 2024).

Existing research often classifies online reading strategies into global, problem-solving, and support strategies. However, there is limited empirical evidence connecting these specific strategy types with the unique difficulties students face when writing their theses (Bekele, 2023). This underscores the need for a targeted investigation into how online reading strategies—framed by metacognitive, cognitive load, and self-regulated learning theories—can help mitigate the challenges of thesis writing among EFL students in higher education. This study seeks to address that gap. The primary objective of this study is to identify which domain of online reading strategies has the most significant impact on difficulties in thesis writing.

## 2.0 Methodology

#### 2.1 Research Design

This study employed a descriptive non-experimental quantitative research design, using correlation analysis to determine which domain of online reading strategies significantly influences difficulties in thesis writing. The descriptive approach provided a comprehensive overview of the variables by systematically describing the levels of online reading strategies and thesis writing difficulties among respondents. This approach allowed the researchers to present patterns and trends based on the gathered data.

Meanwhile, correlation analysis was used to examine the strength and direction of the relationship between the identified domains of online reading strategies and the difficulties encountered in thesis writing. This method enabled the study to identify significant associations without manipulating variables, which is appropriate for examining naturally occurring relationships. The selection of respondents and the data gathering process were guided by observation, case studies, and factual surveys, consistent with current research methodologies (Creswell & Creswell, 2020). Observation helped in understanding the academic behaviors and reading habits of students in context, while case studies provided in-depth insights into individual experiences of thesis writing. Factual surveys served as the primary tool for collecting quantifiable data, ensuring that both the descriptive and correlational aspects of the research were well-supported.

#### 2.2 Research Locale

This study was conducted in Davao City, located on Mindanao, the Philippines' second-largest island. Davao City is recognized as one of the top highly urbanized cities in both Mindanao and the Davao Region. The city comprises a range of private and public educational institutions, from kindergarten to higher education institutions. Moreover, Davao City is renowned for its good governance, natural beauty, rich culture, culinary offerings, high-quality service providers, and its people.

## 2.3 Research Participants

The respondents in the study were 203 students from Assumption College of Davao, a higher education institution, enrolled in the teacher education program. A random sampling technique was employed to ensure that each qualified student had an equal chance of being selected. The researcher obtained a list of eligible teacher education students and randomly selected participants using a computerized randomization tool, ensuring a representative and unbiased sample.

A researcher-designed questionnaire was administered to gather relevant data. To ensure accessibility and participation, the researcher prioritized students who were available and met the inclusion criteria. Teacher education students were chosen as participants because thesis writing is a significant academic requirement in their program. Given the dual challenge of mastering both content and pedagogy, they are likely to encounter a range of difficulties in academic writing. Moreover, the study aims to explore how online reading strategies relate to these challenges, as well as the skills essential for future educators who are expected to model compelling reading and writing practices.

#### 2.4 Research Instruments

The study employed a 5-point Likert scale survey questionnaire, adapted from two existing instruments: Amer et al. (2010), titled "Student Teachers' Perceived Use of Online Reading Strategies," and Puspita (2019), titled "Factors Affecting Students' Difficulties in Writing Thesis." The adaptation process involved selecting and modifying items to align with the specific objectives of this study, with a particular focus on online reading strategies and thesis writing difficulties among teacher education students. Irrelevant or redundant items were revised or removed, and context-specific language was added to increase relevance and clarity. The adapted questionnaire underwent content validation by a panel of three experts in education and educational research. These validators were experienced faculty members with backgrounds in language education, research methodology, and assessment. Their feedback led to the refinement of several items to enhance clarity, coherence, and alignment with the study's constructs.

To ensure the instrument's reliability, a pilot test was conducted with a group of teacher education students who were not part of the actual study sample. The questionnaire yielded excellent internal consistency, with Cronbach's alpha values of 0.960 for online reading strategies and 0.971 for difficulties in thesis writing. These values exceed the generally accepted threshold of 0.70, indicating strong reliability and suggesting that the items within each scale consistently measure their respective constructs. To maintain clarity and accuracy, this instrument is referred to as a researcher-adapted questionnaire, rather than a self-constructed one, reflecting its foundation in existing, validated tools tailored to the context of this study.

## 2.5 Data Gathering Procedure

Data collection for the study was carried out in two phases to ensure thoroughness and reliability. Prior to data collection, formal permission to conduct the study was obtained from the administration of Assumption College of Davao. This included submitting a research proposal and obtaining the necessary approval from the

institution's research ethics committee, ensuring that the study adhered to ethical standards. In the first phase, the adapted questionnaires were distributed electronically to qualified college students enrolled in the teacher education program. Respondents were selected through a simple random sampling technique, ensuring representation across various year levels and minimizing selection bias. Pre-testing of the questionnaire was also conducted on a small group of students who were not part of the final sample, allowing the researcher to refine the clarity and structure of the instrument. In the second phase, follow-up reminders were sent to the selected participants to encourage responses and address any incomplete submissions. Data were collected over a specified period and then analyzed statistically. The gathered data were analyzed to determine which domain of online reading strategies significantly influences students' difficulties in thesis writing.

#### 2.6 Statistical Tools

The following statistical tools were used for data treatment. *Mean* was used to determine the level of online reading strategies and difficulties that college students experience in thesis writing. *Standard Deviation* measures how dispersed the data is from the mean. *Pearson (r) or Pearson Product-Moment Correlation Coefficient* was used to determine the significant relationship between online reading strategies and difficulties in college students' thesis writing. Lastly, *Linear Regression* was used to determine which domains of online reading strategies significantly affect difficulties in thesis writing.

#### 2.7 Ethical Considerations

In conducting research, ethical considerations are essential to ensure the protection of participants' rights and the integrity of the study. Researchers must obtain informed consent, guarantee confidentiality, and minimize harm to participants. Moreover, transparency in reporting results and avoiding any form of data manipulation are crucial to maintaining the credibility of research findings. Ethical guidelines also necessitate the equitable treatment of all participants, ensuring that no group is unfairly advantaged or disadvantaged. Adhering to these principles not only safeguards participants but also upholds the integrity of the research process (Smith, 2022).

#### 3.0 Results and Discussion

## 3.1 The Level of Online Reading Strategies

The results of the study, as presented in Table 1, indicate that the level of online reading strategies among third-year college students encompasses global strategies, problem-solving strategies, and support strategies. It is considered very high, with a mean of 4.25 and a standard deviation of 0.47, indicating that the use of online reading strategies among third-year college students is consistently practiced. Analyzing the results of all its indicators, problem-solving strategies obtained the highest mean of 4.31 with a standard deviation of 0.53. In contrast, support strategies obtained the lowest mean of 4.15 with a standard deviation of 0.55. This suggests that while students always practiced problem-solving strategies such as self-regulation and goal setting, support strategies like note-taking and highlighting are used, but are less prioritized compared to problem-solving and global strategies.

The result is consistent with the study by Dewanti et al. (2023), which emphasizes the importance of strategies such as text previewing and problem-solving for engaging online reading, aligning with the students' demonstrated proficiency in these areas. Problem-Solving Strategies emerged as the most frequently used and highly effective, indicating that students are particularly skilled at managing difficulties encountered during online reading. Common strategies include re-reading sections of text, using context clues, and adjusting reading pace for better comprehension. This finding supports the work of Graham et al. (2020), who argue that strategy instruction, particularly problem-solving techniques, significantly enhances comprehension and academic performance. Moreover, Bernardo and Mante-Estacio (2023) emphasize that these strategies are crucial for synthesizing information and constructing coherent arguments, which are essential skills for academic success.

**Table 1.** The Level of Online Reading Strategies among college students in Davao city

Indicator	SD	Mean	Descriptive Level
Problem-Solving Strategies	0.53	4.31	Very High
Global Strategies	0.49	4.29	Very High
Support Strategies	0.55	4.15	High
Overall	0.47	4.25	Very High

## 3.2 Level of Difficulties in Thesis Writing

Table 2 shows that the overall level of difficulties in thesis writing among third-year college students is high, with a mean of 4.06 and a standard deviation of 0.56, suggesting that the level of student difficulties in thesis writing is often evident. This means that respondents frequently encounter challenges throughout the thesis writing process that encompass personality, sociocultural, and linguistic factors. Among the indicators, linguistic factors have the highest mean of 4.14, with a standard deviation of 0.70, and the lowest obtained is sociocultural factors, with a mean of 4.01 and a standard deviation of 0.61.

**Table 2.** The Level of Difficulties in Thesis Writing among College Students in Davao City

Indicator	SD	Mean	Descriptive Level
Personality Factors	0.62	4.04	High
Sociocultural Factors	0.61	4.01	High
Linguistic Factors	0.70	4.14	High
Overall	0.56	4.06	High

These results indicate that students have significant difficulty with grammar, vocabulary, and communicating their ideas effectively. The results emphasize the importance and necessity of integrated academic support programs that would cover all aspects, including linguistic, internal, and cultural, to facilitate the thesis writing process for students. These findings align with previous research indicating that language-related issues, such as limited vocabulary and challenges with sentence structure, are key obstacles in academic writing (Hamid et al., 2024). Personality factors also contribute substantially to thesis-writing difficulties. Low self-confidence, poor time management, and lack of self-discipline significantly impact students' ability to manage the demands of research and writing. Students who lack intrinsic motivation or self-efficacy often struggle to persevere through challenges, while inadequate time management exacerbates these issues. These findings support existing literature on the importance of motivation, self-discipline, and effective time management for academic success (Criado-Davila et al., 2024).

Moreover, the results are consistent with studies highlighting how sociocultural factors, including access to academic support, influence students' experiences with thesis writing (Shahsavar & Kourepaz, 2020). These findings emphasize the multifaceted challenges students face in thesis writing. While linguistic difficulties are the most prominent, personality and sociocultural factors also play critical roles. To address these challenges, academic institutions should implement comprehensive support systems. Targeted interventions, such as writing workshops, time management training, and mentoring programs, could help students overcome these barriers. By addressing linguistic, personal, and cultural challenges, institutions can better support students in navigating the complexities of thesis writing and achieving academic success.

## 3.3 Significance of the Relationship between Online Reading Strategies and Difficulties in Thesis Writing

Presented in Table 3 is the significant relationship between online reading strategies and difficulties in thesis writing among college students in Davao City. The overall r-value of 0.535, indicating a moderate to strong relationship, and a p-value of 0.000, which is lower than 0.05, signify a significant relationship between online reading strategies and difficulties in thesis writing among college students. Thus, the null hypothesis is rejected. This implies that online reading strategies correlate with difficulties in thesis writing of college students, suggesting that the way students engage with digital reading materials impacts their ability to structure and develop their thesis effectively.

 Table 3. Significant Relationship between Online Reading Strategies and Difficulties in Thesis Writing among College Students in Davao City

	Difficulties in Thesis Writing			
	r-value	p-value	Interpretation	
Online Reading Strategies	0.53	<.001	Significant	

This finding aligns with Yunus and Damayanti (2024), who emphasize the critical role of external support in overcoming academic challenges. The reliance on external assistance highlights the importance of fostering a collaborative academic environment where students can freely share resources and seek mentorship to alleviate some of these difficulties. Institutions can implement structured peer-support programs and provide professional mentoring to bridge the gap between academic demands and students' capacity to meet them. Furthermore, Salom (2023) observed that general reading strategies do not provide adequate support for overcoming language-related barriers, which are critical for thesis writing. This limitation underscores the need for explicit instruction in academic writing skills, focusing on grammar, vocabulary, and clarity of expression, to complement students'

reading strategies. Additionally, specialized workshops and individualized writing support can further help students overcome these persistent linguistic challenges. These findings underscore the necessity for a comprehensive approach to addressing the challenges students encounter in thesis writing. While online reading strategies are beneficial, they should be supplemented with targeted linguistic support and cultural orientation programs to better equip students for overcoming academic and personal difficulties.

## 3.3 The Significance of the Influence of Online Reading Strategies on Difficulties in Thesis Writing

The findings revealed in Table 4 present the regression analysis of the influence of online reading strategies on difficulties in thesis writing. The results indicate that online reading strategies significantly predict these difficulties, with an F-value of 27.534 and a p-value of less than 0.05. The r<sup>2</sup> The value of 0.293 shows that 29.30% of the variance in thesis writing difficulties is explained by online reading strategies, while 70.70% is due to another factor. Among these strategies, support strategies emerged as the strongest predictor, indicating that students who receive external support, such as peer collaboration and instructor guidance, experience fewer difficulties with thesis writing.

This result aligns with the study of Muhammadpour and Khalili-Sabet (2024), which highlighted the role of metacognitive practices, such as planning and monitoring reading approaches, in addressing challenges related to academic writing. Similarly, Temur et al. (2020) found that strategies such as skimming for key information and consolidating sources significantly contribute to reducing the complexity of thesis writing. Moreover, this finding is consistent with Karagoz's (2022) research, which emphasizes the importance of annotating and summarizing texts to enhance comprehension, particularly when navigating online sources for academic purposes. These strategies, which fall under the domain of global strategies, were found to provide meaningful support for students in managing thesis writing tasks.

Table 4. The Significance of the Influence of Online Reading Strategies on Difficulties in Thesis Writing among College Students in Davao City

		Difficulties in Thesis Writing			
Online Reading Strategies	В	β	t-value	Sig.	
Global Strategies	.138	.120	1.187	.237	
Problem-Solving Strategies	.164	.156	1.522	.130	
Support Strategies	.330	.327	3.962	.000	

r-value = .542

 $r^{2}$ -value = .293

F-value = 27.534

p-value = .000

On the other hand, Flavell's (1979) Metacognitive Theory supports the notion that awareness and regulation of cognitive processes, such as those facilitated by problem-solving strategies, can significantly alleviate thesis writing difficulties. According to this theory, students who are metacognitively aware are better equipped to adapt their reading approaches to suit complex tasks, such as interpreting challenging academic texts. Furthermore, findings revealed that support strategies emerged as the most significant predictor of thesis writing difficulties. This result aligns with Zimmerman's (1990) Self-Regulated Learning Theory, which emphasizes the importance of external support mechanisms, such as peer collaboration and instructor guidance, in promoting academic success. Similarly, Harputra and Tambunan (2024) demonstrated that students who utilized support systems experienced fewer challenges in completing their theses, further highlighting the critical role of accessible academic resources in addressing writing difficulties.

#### 4.0 Conclusion

Third-year college students in Davao City demonstrated a high level of engagement with online reading strategies. This suggests that they actively employ techniques such as setting reading goals, solving comprehension problems, and seeking support to better understand digital texts. However, despite this high engagement, students still reported considerable difficulties in thesis writing. This suggests that while online reading strategies are beneficial – particularly in enhancing comprehension and idea generation – they are not entirely sufficient to meet the complex demands of academic writing. Thesis writing requires additional skills, such as argument development, organization, and the use of academic language, which online reading strategies alone may not fully support. A moderate but statistically significant relationship was found between the use of online reading strategies and difficulties with thesis writing. This suggests that these strategies do contribute to reducing writing challenges, but they must be supplemented with targeted academic support to address all aspects of the writing process.

Among the three domains of online reading strategies, support strategies – such as note-taking, asking for help, and using reference materials-had the most significant impact in easing thesis writing difficulties. These strategies offer practical support and enhance students' ability to manage the demands of academic tasks. Therefore, they are essential tools for students, especially in higher-level writing tasks, such as thesis completion. In response to these findings, it is recommended that higher education institutions implement academic support programs focused on developing students' support strategy skills. These may include digital literacy training, thesis writing workshops, peer mentoring, and academic coaching services. Additionally, faculty development programs can help instructors integrate these strategies into their teaching, ensuring that students are consistently guided in applying compelling reading and writing techniques. These initiatives directly support Sustainable Development Goal 4: Quality Education by promoting inclusive and equitable learning opportunities. By equipping students with essential academic skills and support systems, institutions can foster long-term academic success, critical thinking, and lifelong learning – key components of a high-quality education.

# 5.0 Contributions of Authors

Edwin A. Acain: Mr. Acain played a pivotal role in conceptualizing the research framework, designing the methodology, and writing the initial draft of the manuscript. He was actively involved in enhancing the structure and depth of the paper, leading the refinement of the discussion and conclusion sections. His academic guidance and leadership were instrumental in

Jezer Ashvi Q. Salibat: Mr. Salibat co-led the development and enhancement of the paper, contributing significantly to the formulation of research objectives, literature review, and analysis of findings. He collaborated closely with the lead author to strengthen the theoretical foundation and ensure coherence throughout the manuscript. His critical insights enriched the interpretation of the results.

Maria Liza A. Baldonado: Ms. Baldonado served as the editorial reviewer of the manuscript. She provided detailed feedback on the structure, grammar, and overall quality of the writing.

Her revisions enhanced the clarity, coherence, and academic tone of the final manuscript, contributing to the polished presentation of the research.

Kathleen Kyle C. Balisalisa: Ms. Balisalisa was primarily responsible for the data collection process. She conducted the distribution of research instruments, coordinated with respondents, and ensured ethical handling of the data. She also contributed to the preliminary analysis and assisted in interpreting key findings.

Angeline L. Monte: Ms. Monte played a central role in gathering and organizing research data alongside Ms. Balisalisa. She was also involved in refining the statistical results and validating the accuracy of the analyzed outputs, supporting the reliability of the study's conclusions.

Beverly Saladaga: Ms. Saladaga contributed to the data collection and participated in reviewing the data presentation. Her support in tabulating and verifying statistical results helped ensure clarity and accuracy in the results section.

Each author has approved the final version of the manuscript and agrees to be accountable for all aspects of the work, ensuring integrity and accuracy throughout the research process

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## 7.0 Conflict of Interest

A research conflict arises when an investigator's personal, financial, or professional interests could potentially impact or seem to impact the impartiality, integrity, and validity of their study. Since outside interests may have influenced the research's design, conduct, analysis, or reporting, these conflicts may jeopardize the validity of the study's conclusions. Declaring conflicts of interest openly and demonstrating compliance with ethical guidelines protects the credibility of the research and the participating researchers

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