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Research Article

Idea Web Strategy on the Reading Comprehension of EFL Learners: An Enhancement Model

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ABSTRACT

This study quantitatively investigated the impact of integrating writing tasks, specifically the Idea Web strategy, into EFL reading instruction for Taiwanese senior high school students. The research employed a three-group quasi-experimental design to compare the effectiveness of different reading strategies on students' comprehension. 24 participants were divided into three groups of 8 members each: Reading with Summarizing, Reading with Journalizing, and a control group using a conventional oral discussion strategy. Reading comprehension was measured using pre- and posttests. The quantitative results demonstrated that integrating writing tasks, particularly summarizing and journalizing, led to significant improvements in students' reading comprehension compared to the traditional approach. This suggests that incorporating active writing strategies enhances reading comprehension more effectively than conventional methods in EFL contexts.

Keywords: *EFL Learners, Reading Comprehension, Idea Web Strategy, Quasi-Experimental Design, Statistical Analysis*

Introduction

Strong reading comprehension skills are indispensable for Taiwanese senior high school students learning English as a Foreign Language (EFL) in an increasingly interconnected world. However, these students face significant hurdles in developing these skills because instructional methods overemphasize rote memorization and grammar, rather than meaningful engagement with texts. This is reflected in

Taiwan's declining performance in international assessments; the Programme for International Student Assessment (PISA) indicates a concerning decline in Taiwan's reading comprehension ranking, falling from 3rd in 2022 (OECD, 2022) to 5th in 2023 (Taiwan News, 2024). This decline suggests that current EFL reading instruction in Taiwan may not adequately equip students with the crucial comprehension skills needed for academic success

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and future careers. Specifically, the overreliance on rote memorization and decontextualized grammar instruction may hinder students' ability to actively construct meaning from texts, a key component of adequate reading comprehension.

To address this issue, this study quantitatively investigates the impact of integrating writing tasks, specifically the Idea Web strategy, into EFL reading instruction for Taiwanese senior high school students. The study seeks to determine whether integrating the Idea Web strategy enhances reading comprehension among Taiwanese EFL senior high school students more effectively than traditional instructional methods.

This research aims to address this gap by providing empirical evidence on the effectiveness of the Idea Web strategy in the specific context of Taiwanese cram schools, a setting with limited existing research. Process Theory (Carrell, 1983) and Schema Theory (Rumelhart, 1977) inform the study. These theories posit that reading comprehension is an active process influenced by cognitive strategies and the reader's prior knowledge. By examining the impact of the Idea Web strategy, this research seeks to provide insights into instructional practices that foster active engagement and knowledge construction, ultimately leading to improved reading comprehension outcomes for EFL learners.

This study employs an explanatory sequential design, a mixed-methods approach that begins with quantitative data collection and analysis to identify statistical trends and relationships. The current focus of this study is specifically within this initial quantitative phase of the methodological framework. This involves administering pre- and post-tests to gather measurable data on students' reading comprehension abilities in experimental and control groups. Subsequently, the collected quantitative data will undergo rigorous statistical analysis to identify any statistically significant differences in the improvement of reading comprehension scores between the group using the Idea Web strategy and the group receiving traditional instruction. Ultimately, this research aims to contribute quantitative evidence supporting the adoption of more student-centered

learning approaches in EFL reading instruction in Taiwan.

Literature Review

Second language (L2) reading is not merely a passive process of decoding words but an active endeavor where meaning is constructed through the interplay of the reader's existing knowledge, language proficiency, and strategic awareness (Grabe et al., 2020). Unlike reading in one's native language, L2 reading serves many purposes, including the acquisition of academic content, engagement with leisure materials, and development of cultural understanding (Alderson & Banerjee, 2014). Consequently, these varied objectives necessitate the application of diverse reading strategies, such as skimming and scanning for specific details, intensive reading for deep comprehension, and extensive reading for pleasure and vocabulary enrichment.

Furthermore, examining the nature of L2 reading strategies provides researchers with crucial insights into effective instructional practices. Studies have delved into the cognitive demands of different task types (Alderson & Banerjee, 2014) and the influence of factors like text genre (Carrell, 2018) on reading performance. This body of research informs the development of task-based approaches tailored to address learners' specific needs and learning objectives, ultimately empowering them to become strategic and successful L2 readers.

Transitioning to the interconnectedness of language skills, the relationship between reading and writing in second language (L2) acquisition is dynamic and mutually reinforcing. These two skills involve shared cognitive processes, including planning, comprehension, and the activation of prior knowledge. Indeed, viewing reading and writing as transactional and interdependent activities highlights their reciprocal influence (Graham & MacArthur, 2017). To effectively cultivate this connection, educators often adopt principles such as providing authentic tasks that mirror real-world communication, demonstrating the practical applications of both skills and emphasizing the shared strategies and processes

inherent in reading and writing, helping learners recognize their synergy.

Consequently, the integration of reading and writing in L2 classrooms has been shown to yield significant positive outcomes. Research indicates improvements in writing skills, enhanced reading comprehension, and the development of metacognitive abilities among learners (Ferris, 2017). These findings underscore the considerable potential of effectively leveraging the symbiotic relationship between reading and writing to support L2 learners throughout their language acquisition journey. Moreover, L2 writing instruction itself encompasses a variety of strategies, each offering distinct advantages. Among these, writing from sources encourages critical engagement with texts, fostering skills in summarizing, paraphrasing, and

synthesizing information, and ultimately improving writing fluency and accuracy (Lantolf & Thorne, 2018).

On the other hand, summary writing tasks learners with condensing key information, enhancing their ability to identify essential elements and express them concisely, thus contributing to overall writing clarity. Additionally, journal writing provides a supportive space for personal reflection and articulation, fostering fluency, vocabulary growth, and exploring ideas in a less structured format (MacIntyre, 2014). By incorporating these diverse writing practices, educators can equip L2 learners with a comprehensive skill set, enabling them to write effectively across various contexts and for different purposes.

Theoretical Framework

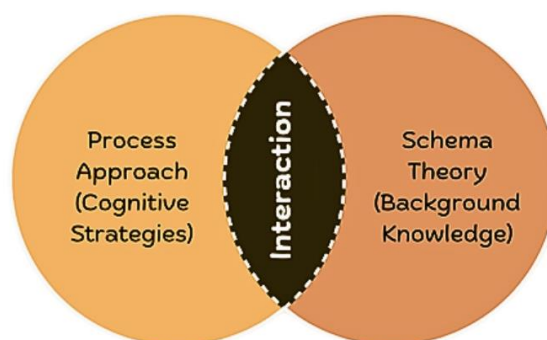


Figure 1. Interplay of Process and Schema in Reading Comprehension

The figure illustrates that the study is grounded in Process Theory (Carrell, 1983) and Schema Theory (Rumelhart, 1977) to explore how teaching environments affect L2 learners' reading comprehension. Process Theory views reading as an active process involving the use of cognitive strategies, while Schema Theory underscores the role of the reader's prior knowledge (schemata) in interpreting text. The interplay between these theories suggests that effective reading comprehension depends on both active cognitive engagement and the activation of existing knowledge.

Reading comprehension theories have evolved from viewing reading as passive decoding focused on extracting a single "correct" meaning (Heilman et al., 1998) to seeing it as an

active process of constructing meaning, a concept central to the Reading Comprehension Enhancement Model developed in this study. This process involves several key assumptions (McNeil, 1992): the influence of prior knowledge, the necessity of both "bottom-up" and "top-down" strategies, the activation of schemata to anticipate content, the importance of deeper processing for better understanding, and the role of reading context in shaping interpretation. Schema Theory further emphasizes the active role of prior knowledge, with readers using their existing knowledge structures (linguistic, content, and formal knowledge) to interact with and interpret the text (Carrell, 1983).

Table 1. Reading Comprehension Schemata

Schema Type	Description	Importance in L2 Reading
Linguistic Knowledge	Understanding the language itself, including vocabulary, grammar, and syntax.	It is essential for decoding the text and understanding the meaning of individual words and sentences.
Content Knowledge	Familiarity with the topic being discussed in the text.	Activates relevant background knowledge, making understanding and interpreting new information more manageable.
Formal Knowledge	Understanding of different text structures and genres.	Provides a framework for understanding how the text is organized and what to expect from it.

Note: The Table outlines the three key types of schemata that influence L2 reading comprehension

The table above indicates that successful L2 reading comprehension depends on the interaction of various types of knowledge, each posing distinct challenges for Taiwanese Senior High School EFL learners. A solid foundation in linguistic knowledge is crucial for decoding text and understanding sentence structure, while content knowledge supports interpretation by activating relevant background information. Additionally, formal knowledge—awareness of text organization—helps learners navigate different text structures effectively. Recognizing the significance of formal knowledge, this study deliberately employs expository texts with clear structural features (Carrell, 2018). This targeted approach facilitates a more precise examination of how specific writing tasks affect comprehension processes such as identifying main ideas, making inferences, and connecting textual elements. Ultimately, this controlled methodology provides deeper insight into how instructional strategies can be refined to improve particular reading skills among EFL learners.

Beyond these core knowledge types, readers also utilize domain schemata for subject-specific texts and general world knowledge for everyday contexts. McNeil (1992) suggests that effective reading instruction necessitates "building the toolbox" by teaching text structures and "equipping students to use the right tools" by activating appropriate schemata. Developing this broad range of schemata is crucial for enabling students to comprehend diverse texts effectively and highlights the interconnectedness of reading and writing skills; an area explored further in this study.

The SSQ method, also known as the Survey-Question-Read method, was introduced by Francis Pleasant Robinson in his 1946 book "Effective Study." Robinson designed this method to help students enhance their reading comprehension and study skills by actively engaging with the text through surveying, questioning, and reading. On the other hand, idea webs are visual tools for representing concepts and their relationships, popularized by Tony Buzan in the 1970s. These webs use a central idea, branches, sub-nodes, keywords, and images to improve learning, memory, organization, and creativity.

The SSQ method and the Idea Web strategy are active learning techniques to foster a more profound understanding. They share similarities in involving active reading strategies, including summarizing as a common element and encouraging a deeper understanding of the text. However, they differ in their purpose, components, and activities. The SSQ method enhances active engagement and understanding through surveying, questioning, and reading. At the same time, the Idea Web strategy facilitates comprehension, critical thinking, and reflection through reading, summarizing, and journalizing (or variations thereof).

The specific activities also distinguish the two strategies. SSQ involves skimming the text for an overview, formulating questions, and then reading in-depth, with summarizing focused on key ideas. In contrast, the Idea Web strategy involves reading, summarizing, and journalizing, with summarizing and journalizing allowing for broader content and emphasizing post-reading reflection. For example, SSQ

might involve surveying a news article, questioning its causes and effects, and summarizing the solutions. In contrast, the Idea Web strategy could involve reading a story, summarizing events and characters, and journaling personal reflections.

Bandura's Social Learning Theory and Self-efficacy theory strongly support using the Idea Web strategy in reading comprehension. Social Learning Theory aligns with the collaborative nature of Idea Webs, where students engage in

a dynamic learning environment, brainstorming and sharing ideas, observing and learning from peers, and challenging stereotypes, thus fostering inclusivity. Self-efficacy theory connects with the empowering aspect of Idea Webs, as students actively construct meaning, make connections, and experience a sense of accomplishment, which enhances their confidence, motivation, and willingness to tackle more challenging reading strategies, moving away from traditional methods focused on memorization.

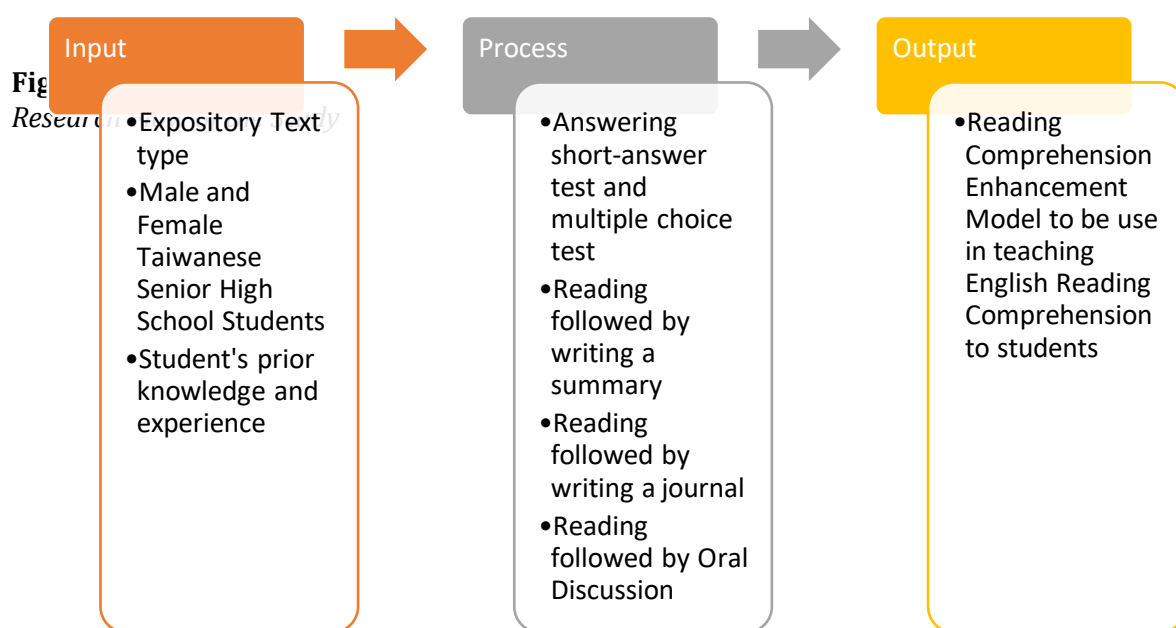


Figure 2 illustrates the research flow for the study, outlining the factors influencing the effectiveness of incorporating writing tasks into EFL reading instruction. The model begins with three key inputs: expository text type, target population, and prior knowledge and experience. These inputs shape the students' engagement with different writing tasks, which are divided into three groups: summary writing, journal entry, and oral discussion. The effectiveness of each writing task in enhancing reading comprehension is then evaluated through a reading comprehension assessment. The anticipated output is to gain insights into the effectiveness of the Reading Comprehension Enhancement Model and contribute to understanding whether integrating writing tasks leads to improved reading comprehension.

Statement of Purpose

This quantitative study aimed to rigorously examine the impact of incorporating writing tasks, using the "Idea Web" approach, within EFL reading instruction for Taiwanese senior high school students. Through measurable data and statistical analysis, the core purpose was to determine whether this innovative approach yielded a significant improvement in students' reading comprehension compared to traditional teaching methods. The researcher quantified these effects, likely using standardized assessments, to ascertain whether differences in comprehension between students taught with the Idea Web strategy and those taught traditionally were statistically significant. The study focused on this specific population to account for the potential influence of education and culture on instructional effectiveness. This

investigation tested the relationship between the Idea Web strategy and reading

comprehension to inform EFL pedagogy in Taiwanese senior high schools.

Methodology Design



This study adopted an explanatory sequential design, beginning with a quantitative phase that utilized a three-group quasi-experimental approach, as illustrated in the figure above. The primary objective of this phase was to evaluate the effects of various reading strategies on EFL learners' comprehension. Drawing on Constructivism (Vygotsky, 1978, as cited in Smith, 2022)—which emphasizes that learning is an active process shaped by experience and social interaction—participants were divided into three groups. The first group engaged in "Reading with Summarizing," where they condensed texts to enhance analytical skills, reflecting con-

structivist ideals of active knowledge construction. The second group participated in "Reading with Journalizing," using reflective writing to link texts to personal experiences, thereby fostering individual meaning-making. The third group was involved in "Reading with Oral Discussion," promoting comprehension through peer interaction, underscoring the social dimension of learning. Reading comprehension was assessed using pre- and post-tests across all groups to compare the effectiveness of each strategy. The study then transitioned into a qualitative phase, the findings of which are beyond the scope of this discussion.

Study Participants

Table 2. Study Participants by Gender (Quantitative)

Gender	Number
Male	9
Female	15
Total	24

Note: The Table shows more female participants than male participants.

The participants comprised 24 purposively selected Taiwanese senior high school students, male and female, aged 18–19 years, attending cram school in Taichung City, Taiwan. These participants were assigned to one of three groups of eight (8) members: Reading with Summarizing, Reading with Journalizing, or Reading with Oral Discussion. All groups participated in pre- and post-tests using the Reading Comprehension Test (RCT) to measure improvements in reading comprehension. The purposive sampling method was employed

to ensure the selection of participants who met the study's age criteria and were actively involved, which was essential for the structured interventions and comparative analysis between the groups.

Data Gathering Instruments

The study employed the GEPT Questionnaire (Reading), which aligns with the Ministry of Education in Taiwan's emphasis on English proficiency as a prerequisite for university admission. This GEPT Questionnaire (Reading),

consisting of 45 items, assessed various dimensions of English proficiency, such as understanding the main ideas, identifying specific details, making inferences, and recognizing the meaning of words and phrases in context. It had a reliability index of 0.85 (Tineke & Luke, 2013), indicating that it fell within the "acceptable" range and that the test results were stable and dependable for making decisions based on the test scores, such as evaluating a student's English proficiency. The quantitative data derived from this reliable measure of English proficiency (GEPT Questionnaire) were used in the study.

Data Gathering Procedures

Before the intervention, a pretest was administered to all participating students to establish a baseline measure of their English reading comprehension skills. The pretest consisted of 17 items to assess various aspects of reading comprehension. Given that the students are studying English as a Foreign Language (EFL) and do not use the language regularly in their daily lives, this pretest was crucial for determining their initial comprehension levels before introducing the reading interventions. This ensured that any subsequent changes in reading comprehension could be attributed to the interventions themselves.

Table 3. Reading Comprehension Intervention Timetable

Day	Activity (Intensified Schedule)
1	Pretest
2	Pre-Reading
3	Apply Reading Strategy
4	Discussion & Review
5	Wrap-up & Writing Task
6	Final Review and Assessment
7	Rest and Recharge
Repeat Days 2-6 for Weeks 2, 3, & 4	Articles 2, 3, and 4
29	Posttest and Student Feedback Form
30	One on One Interviews
Total Days	30

Note: The Table illustrates the 30-day schedule of activities for the reading comprehension intervention.

After the pretest, the intervention phase was conducted over a period of 30 days. During this time, students engaged with a set of four articles, each group applying a distinct reading strategy. The "Reading with Summarizing" group focused on condensing each article into key points. The "Reading with Journalizing" group engaged in reflective writing, connecting the content to their personal experiences. Meanwhile, the "Reading with Oral Discussion" group enhanced their comprehension through guided classroom discussions. To ensure consistency across all groups, the 30-Day Reading Comprehension Intervention Timetable, as presented in the table above, was strictly followed.

Upon completion of the 30-day intervention, a post-test, identical to the pretest (17 items), was administered to all groups to measure any changes in reading comprehension. Following the post-test, students were asked to complete a feedback form to gather their perceptions and experiences with the reading strategies. The feedback form was designed to complement the post-test results and gather initial student perceptions. It was intended to be used in one-on-one interviews to further qualitatively explore the student's learning experiences and attitudes toward the interventions.

Data Analysis

The quantitative data analysis in this study was designed to evaluate the effectiveness of

various reading strategies on EFL students' comprehension skills. This phase of the analysis focused on statistical evaluation. Several statistical tools were employed to analyze and interpret the quantitative data gathered. Firstly, Weighted Mean was used to determine the average of the students' experiences during the implementation of the three learning strategies, with the results interpreted using a Likert scale (Likert, 1932). Mean was used to calculate the average scores of the pretest and post-test. Standard Deviation was used to measure the spread of data distribution.

Furthermore, t-tests were conducted, including Paired Two Sample for Means (two-tailed) to determine the significant difference between pretest and post-test scores within each group and Two-Sample Assuming Equal Variances (two-tailed) to determine the significant difference between groups on the post-test. An additional t-test, Two-Sample Assuming Equal Variances (one-tailed), was used to identify which group performed better. Finally, One-way ANOVA [Single Factor] was used to determine whether mean differences between the groups' strengths were statistically significant and to determine significant differences in the attitude towards the intervention experienced by the three groups.

Ethical Consideration

The study was conducted according to the guidelines outlined in the Declaration of Helsinki (World Medical Association, 2013). Approval was obtained from the Research and Ethics Committee of the University of the Visayas, with Reference No. NP2024-427, dated January 24, 2025. The study involved Taiwanese EFL senior high school students aged 18–19 years enrolled in a cram school in Taichung City, Taiwan, who voluntarily participated in an online survey. Before completing the questionnaires, participants received an informed consent form detailing the study's purpose, procedures, risks and benefits, confidentiality measures, voluntary participation, and contact information. No financial incentives were offered for participation. The authors declared no conflicts of interest.

Results and Discussion

This chapter presents the analysis and interpretation of findings from a questionnaire designed to assess the feasibility of integrating the Idea Web Strategy writing task into EFL reading instruction for Taiwanese senior high school students. The data, analyzed using a Data Analysis computer program, are presented in tables and text and interpreted by the researcher.

Pretest and Posttest Performance in Reading Comprehension

Table 4. Pretest and Posttest Performance of the Experimental and Control Groups in Reading Comprehension

Group	Test	Mean	SD	Description
Experimental Group 1 (Writing Summary)	Pretest	10.38	1.41	Below Average
	Posttest	16.38	1.41	Above Average
Experimental Group 2 (Journal Writing)	Pretest	10.00	1.31	Below Average
	Posttest	15.88	1.13	Above Average
Control Group (Conventional Strategy)	Pretest	9.75	1.67	Below Average
	Posttest	14.38	1.60	Above Average

Note: No. of Items= 17 75% Expected performance=12.75

Table 4 compellingly presents the participants' reading comprehension performance across the experimental and control groups, revealing a consistent pattern of improvement from the pretest to the posttest in all groups. While all groups gained, the experimental groups, Reading with Summary Writing and

Reading with Journal Writing, demonstrated a more substantial shift from "Below Average" to "Above Average" performance. This suggests that integrating writing tasks into reading instruction holds considerable promise for enhancing EFL learners' reading comprehension.

Furthermore, the consistent standard deviation within the experimental groups from pre-test to posttest indicates a uniform level of improvement among participants, implying that the writing interventions were effective across the ability range within those groups.

In contrast, the control group, which employed a conventional strategy, also improved, yet the overall gain was less pronounced. This disparity implies that while traditional

methods can enhance reading comprehension, incorporating active writing tasks may yield more significant and consistent benefits for EFL learners. These findings align with the broader consensus in recent research, which posits that engaging learners in actively processing texts through writing promotes deeper cognitive engagement and facilitates improved comprehension outcomes (Zhang & Li, 2018).

Mean Gain of the Student's Reading Comprehension Performance

Table 5. Mean Gain in Reading Comprehension Performance of the Three Groups

Group	Mean Gain	SD of MG	t- Stat	p-value	Remarks
Experimental Group 1 (Writing Summary)	6.00	0.926	31.75	.000	Significant
Experimental Group 2 (Journal Writing)	5.88	1.128	25.92	.000	Significant
Control Group (Conventional Strategy)	4.63	1.84	12.36	.000	Significant

Note: The Table presents the mean gain and statistical significance of reading comprehension improvement for each of the three groups following the intervention

The results in Table 5 indicate that the experimental groups, particularly the Writing Summary group, achieved the highest mean gain in reading comprehension, reflecting a substantial improvement in their ability to understand and process reading materials. The mean gain of 6.00 in Experimental Group 1 (Writing Summary) stands out as the most significant compared to both the Journal Writing group (5.88) and the Control group (4.63). This finding explicitly suggests that summarizing, which requires students to engage with the text and actively condense key ideas, played a critical role in enhancing comprehension. The standard deviation of 0.926 further highlights that the improvement was consistent across participants in this group, showing that summarizing as a strategy has a reliable effect on reading comprehension performance. The significant difference between Experimental Group 1 and the Control group ($p=.000$) suggests that the Writing Summary strategy provides a more robust intervention for improving reading comprehension than traditional methods, which involve more passive forms of engagement.

In contrast, while the Journal Writing group also demonstrated a significant improvement with a mean gain of 5.88, it was slightly less than the Writing Summary group, indicating that while journal writing is effective, it may not be as directly impactful on reading comprehension as summarizing. The process of journal writing, which involves reflective and personal connections to the text, may enhance comprehension in more indirect ways, such as fostering deeper engagement and critical thinking, but it could be less structured compared to summarizing, potentially leading to variability in its effectiveness. The control group, using traditional oral discussion strategies, also showed improvement, though less pronounced. This highlights the potential benefits of active, writing-based interventions over conventional methods, supporting the idea that integrating tasks like summarizing and journal writing can significantly boost reading comprehension skills in EFL learners. The statistical significance across all groups ($p=.000$) confirms that all interventions led to improvements, but the experimental strategies yielded more substantial and consistent results.

Difference in the Mean Gain of the three Groups

Table 6. Difference in the Mean Gain Among the three Learning Groups

Source of Variance	SS	df	MS	F and p value	Significance
Between-treatments	27.75	2	13.875	$F = 7.583$	Significant
Within-treatments	126.25	69	1.8297	$P = .001$	
Total	154	71			

Pairwise Comparisons		HSD _{.05} = 0.9353 HSD _{.01} = 1.1764	Q _{.05} = 3.3875 Q _{.01} = 4.2605
T₁:T₂	M ₁ = 6.00 M ₂ = 5.88	0.13	Q = 0.45 (p = .94512)
T₁:T₃	M ₁ = 6.00 M ₃ = 4.63	1.38	Q = 4.98 (p = .00219)
T₂:T₃	M ₂ = 5.88 M ₃ = 4.63	1.25	Q = 4.53 (p = .00580)

Note: M1= Writing Summary M2=Journal Writing M3=Conventional Strategy

Table 6 presents the results of the ANOVA and post-hoc tests, revealing significant differences in the mean gain of reading comprehension among the three groups. The ANOVA results indicate a statistically significant difference between treatments ($F=7.583$, $p=.001$), confirming that the different instructional strategies had varying effects on reading comprehension improvement. Specifically, the post-hoc analysis demonstrates that while there was no significant difference in mean gain between Experimental Group 1 (Writing Summary) and Experimental Group 2 (Journal Writing) ($p=.94512$), both experimental groups showed significantly greater mean gains than the control group ($p=.00219$ and $p=.00580$, respectively).

These findings strongly suggest that incorporating writing tasks, whether summarizing or journalizing, leads to a more substantial improvement in reading comprehension than traditional oral discussion methods. This aligns with a growing body of research that underscores the effectiveness of writing-to-learn approaches in deepening students' engagement with texts and enhancing comprehension. The study reinforces that writing is a powerful tool for processing information, promoting active learning, and ultimately fostering greater gains in reading comprehension for EFL learners.

The quantitative results in Tables 4, 5, and 6 demonstrate the positive impact of integrating writing tasks into EFL reading instruction. While all groups showed improved reading comprehension, the experimental groups, which utilized summary writing and journal writing, exhibited significantly greater gains than the control group using traditional oral discussion methods. This evidence strongly suggests that incorporating active writing strategies enhances reading comprehension more effectively than conventional approaches, highlighting the potential of writing-based interventions to improve EFL learners' reading outcomes.

Reading Comprehension Enhancement Model

The researcher proposes a model that incorporates the "Idea Web Strategy" as its central framework to enhance reading comprehension among Taiwanese Senior High School EFL students. This model encourages students to actively organize and connect key ideas while reading, thus fostering a more profound understanding and engagement with texts. Building upon this foundation, the Reading Comprehension Enhancement model offers a comprehensive approach that further enhances reading comprehension and caters to diverse learning styles.

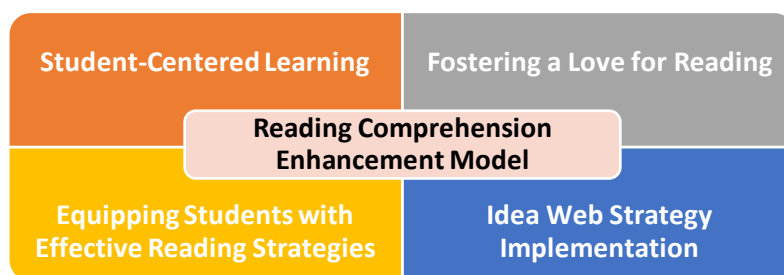


Figure 5. Reading Comprehension Enhancement Model

The figure illustrates the Reading Comprehension Enhancement Model, which integrates the Idea Web strategy and writing tasks to support the development of EFL learners' reading comprehension. This model adopts a student-centered approach that emphasizes collaboration, choice, and learner autonomy. It fosters a positive reading environment through the use of varied materials and extensive reading practices. Additionally, the model incorporates explicit instruction and guided practice of reading strategies, including the Idea Web and the SSQ method, alongside opportunities for reflection and self-assessment. The Idea Web strategy is embedded within instruction through summary writing and/or journal writing, both of which aim to deepen comprehension and student engagement. Ultimately, the model offers a comprehensive and adaptable framework for EFL instruction, combining active learning, diverse texts, strategy training, and meaningful writing tasks to enhance reading comprehension and cultivate a lasting appreciation for reading.

The Idea Web Strategy visually represents the relationships between different concepts within a text, helping students identify main ideas, supporting details, and the connections between them. This can be achieved through various writing tasks, such as:

Summary Writing (RSW): Students summarize sections of a text in their own words, focusing on the main points and key details. This task helps them synthesize information and improves retention.

Journal Writing (RJW): Students reflect on their thoughts, feelings, and reactions to the text through journal entries. This encourages deeper thinking and personal connection with the material.

The Idea Web Strategy model is designed to be flexible and adaptable. Teachers can implement both RSW and RJW strategies or select the one that best suits their students and the specific text being studied.

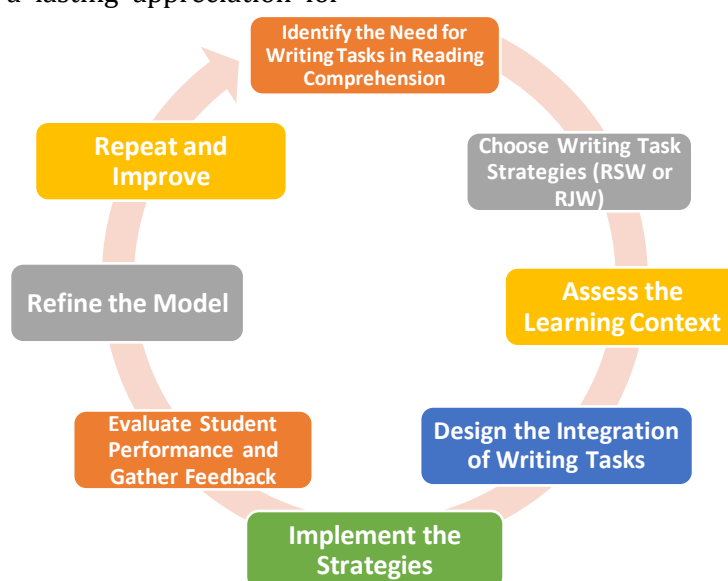


Figure 6. Idea Web Strategy for EFL Reading Comprehension

The flowchart above showcases a process for developing and refining the integration of the Idea Web Strategy, along with its associated writing tasks, within a Reading Comprehension Model (RCM) to enhance students' engagement and comprehension in reading. The following steps provide a detailed guide for educators:

1. **Identify the Need for the Idea Web Strategy in Reading Comprehension:** Traditional reading comprehension methods often fail to actively engage EFL students. The Idea Web Strategy encourages students to organize and connect key ideas, thus deepening their understanding. For instance, a teacher in Taiwan might notice students struggling to identify main ideas in complex texts and recognize the need for a more interactive approach. Implementing this strategy fosters a stimulating learning environment that promotes active participation and deeper comprehension.
2. **Choose Writing Task Strategies within the Idea Web Framework:** Once the need for the Idea Web Strategy is established, teachers must select writing tasks that align with lesson objectives. Summary Writing (RSW) reinforces comprehension by requiring students to summarize key points, while Journal Writing (RJW) fosters reflection and critical thinking by prompting personal engagement with the text. By choosing the right strategy, teachers ensure students actively process and internalize information.
3. **Assess the Learning Context:** Before implementation, teachers must assess students' learning styles, proficiency levels, and potential challenges. Some students may struggle with vocabulary, while others may hesitate to participate in discussions. Understanding these differences allows teachers to tailor support, such as pre-teaching key terms or simplifying text structure. A well-assessed learning environment ensures all students can effectively engage with the strategy.
4. **Design the Integration of Writing Tasks within the Idea Web Strategy:** Teachers should break texts into manageable sections and provide targeted prompts for writing tasks. Graphic organizers can help students visualize key ideas, thereby improving their summaries and reflections. Collaboration, peer feedback, and discussions further enhance comprehension and writing skills. Structuring writing tasks effectively ensures students engage deeply with the material.
5. **Implement the Strategies:** Effective implementation requires clear instructions, modeling, and continuous guidance. Teachers should demonstrate how to identify main ideas and connections within the text. Providing feedback, monitoring progress, and fostering collaboration ensure students remain engaged. A supportive learning environment encourages active participation and strengthens comprehension.
6. **Evaluate Student Performance and Gather Feedback:** Assessment methods like pre-tests, post-tests, and informal feedback help gauge the effectiveness of the strategies. Teachers should track student progress and identify areas for improvement. Gathering student feedback through discussions or surveys ensures the strategies remain relevant and engaging. Continuous evaluation refines the approach for better learning outcomes.
7. **Refine the Model:** Based on assessments and feedback, teachers should adjust writing tasks, prompts, or activities to address student challenges. If comprehension issues persist, tasks can be modified for better focus. Reflecting on overall implementation ensures the strategy remains effective and engaging. Continuous refinement enhances its impact on student learning.
8. **Repeat and Improve:** The Idea Web Strategy requires ongoing implementation, evaluation, and refinement. Teachers should consistently assess its effectiveness, adapt as needed, and incorporate best practices in reading instruction. This cycle of improvement sustains student engagement, fosters deeper comprehension, and builds confident, independent readers.

Recent studies indicate that integrating writing tasks into reading comprehension improves learning outcomes. Zhang and Zhou (2022) found that summary writing enhances

text organization and retention, while Wei and Huang (2021) noted that journal writing fosters deeper reflection. Wang (2019) and Chen (2020) concluded that interactive writing tasks lead to better comprehension than traditional methods.

This study confirms the effectiveness of the Idea Web Strategy in EFL reading instruction for Taiwanese senior high school students. The strategy, especially the Reading with Summary Writing (RSW) component, significantly improved comprehension. The Reading with Journal Writing (RJW) component also showed benefits, though they were less consistent. Traditional methods, such as oral discussion, proved less effective than the Idea Web Strategy. These results strongly suggest that incorporating the Idea Web Strategy, particularly RSW, can significantly enhance reading comprehension.

Limitations of the Study

While this study provides valuable insights into EFL learners' experiences with different reading strategies, it is important to acknowledge its limitations. Firstly, the sample size of 24 participants, all drawn from a single cram school in Taichung City, may limit the generalizability of the findings to other contexts, such as public or private schools or students from different regions. Additionally, the participants in this study were studying English as a foreign language. They did not use it in their everyday lives, which may affect the applicability of the findings to learners in immersion environments. Furthermore, the proficiency levels of the students enrolled in the cram school consisted of medium to high-level learners, potentially limiting the transferability of results to learners with lower English proficiency. Secondly, the study's reliance on self-report data gathered through interviews and feedback forms may be subject to potential biases, such as social desirability bias, where participants may provide responses they believe are more favorable. Finally, while the qualitative phase aimed to provide rich and nuanced accounts of students' experiences, the focus on three specific reading strategies (summarizing, journal writing, and oral discussion) means that other potentially effective strategies were

not explored, limiting the breadth of the findings.

Conclusions

The quantitative findings of this study offer compelling evidence that integrating writing tasks into EFL reading instruction significantly enhances reading comprehension among Taiwanese senior high school students. The experimental groups, which employed summary writing and journal writing strategies, demonstrated greater improvements in reading comprehension compared to the control group, which utilized a conventional oral discussion approach. These results underscore the potential of active, writing-based interventions to foster deeper engagement with texts and promote more effective learning outcomes in EFL contexts.

While the quantitative data establishes the efficacy of writing-integrated reading instruction, understanding the students' perspectives and experiences with these different learning strategies is equally important. Therefore, the subsequent qualitative phase of this study will explore in detail the students' attitudes toward the interventions and their reflections on the impact of summary writing, journal writing, and oral discussion on their reading comprehension development. This qualitative exploration will provide a richer, more nuanced understanding of the quantitative findings and offer valuable insights for pedagogical applications.

Recommendations

EFL educators are strongly encouraged to implement the Idea Web strategy and similar writing-integrated approaches in their reading instruction. The quantitative results demonstrate that incorporating writing tasks, such as summarizing and journalizing, significantly improves students' reading comprehension compared to traditional methods. Therefore, teachers should prioritize the integration of these active learning strategies into their lesson plans to foster deeper engagement with texts and enhance students' comprehension skills.

Educational institutions and policymakers should develop guidelines and support systems that facilitate the widespread adoption of effective writing-based reading instruction. This

may include providing teachers with professional development opportunities to learn how to implement strategies like the Idea Web, allocating resources for materials and technology that support these approaches, and revising curriculum frameworks to emphasize the importance of integrating reading and writing. Creating a supportive policy environment is crucial for ensuring that the benefits of these instructional practices are realized on a larger scale.

Future research should expand upon this study's findings by investigating the effectiveness of the Idea Web strategy and other writing-integrated reading approaches with different populations of EFL learners. This could include exploring their impact on students at other grade levels (e.g., elementary or university), in different educational settings (e.g., government, private, or international schools), and across various cultural contexts. Additionally, future studies could examine the long-term effects of these interventions on students' reading development and investigate how they might be adapted to suit diverse learning styles and needs.

References

- Alderson, J. C., & Banerjee, J. (2014). *Assessing reading comprehension*. Cambridge University Press.
- Carrell, P. L. (1983). Some applications of schema theory in reading comprehension. *Cambridge University Press*.
- Esmaeili, A. (2015). Improving writing skills through reading. *Journal of Educational Psychology*, 10(2), 213-225.
- Ferris, D. (2017). *Teaching reading and writing in second language classrooms*. Routledge.
- Graham, S., & MacArthur, C. A. (2017). The role of writing in the development of reading comprehension. *Learning and Instruction*, 47, 41-53.
- Harris, T. L., & Hodges, R. E. (1995). *The Literacy Dictionary: The Vocabulary of Reading and Writing*. National Council of Teachers of English.
- Heilman, A. W., Blair, T. R., & Rupley, W. H. (1998). *Principles and practices of teaching reading*. Merrill.
- Lantolf, J. P., & Thorne, S. L. (2018). *Sociocultural theory and second language learning*. Oxford University Press.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of Psychology*, 22(140), 55-55.
- MacIntyre, P. D. (2014). The role of self-perception in second language learning. *Language Teaching Research*, 18(1), 1-20.
- McNeil, D. (1992). *The meaning of meaning: A study of the influence of cognitive development on teaching reading*. Cambridge University Press.
- OECD. (2022). *PISA 2022 results: The state of reading comprehension in the world's education systems*. Organization for Economic Co-operation and Development. Retrieved from <https://www.oecd.org/pisa>
- Rumelhart, D. E. (1977). Toward an interactive model of reading. *Cognition*, 5(3), 1-24.
- Smith, M. L. (2022). The impact of social learning theory on language acquisition. *Journal of Educational Psychology*, 85(1), 32-40.
- Taiwan News. (2024). Taiwan's reading comprehension ranking drops in PISA 2023 results. *Taiwan News*. Retrieved from <https://www.taiwannews.com.tw>
- Tineke, A., & Luke, A. (2013). *The GEPT Research Report: Language Proficiency and Student Outcomes*. GEPT Research Division. Retrieved from <https://www.gept.org>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wei, L., & Huang, W. (2021). Active learning strategies for improving reading comprehension. *TESOL Quarterly*, 55(4), 1132-1148.
- World Medical Association. (2013). *Declaration of Helsinki: Ethical Principles for Medical research involving human subjects*. Retrieved from <https://www.wma.net/what-we-do/medical-ethics/declaration-of-helsinki>
- Zhang, Y., & Li, W. (2018). The role of writing in second language reading comprehension. *International Journal of Applied Linguistics*, 28(2), 134-148.