



## I KNOW AND I LEARN! PRE-SERVICE TEACHERS REFLECT ON KWL IN TAIWAN

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**Abstract:** Effective reading strategies for pre-service teachers are of critical importance in this day and age, amidst the changes taking place in English as a Foreign Language (EFL) classes. This study highlights the KWL (Know, Want to Know, Learned) strategy as a powerful approach to boost comprehension skills of prospective teachers. This qualitative case study conducted at National Ping Tung University (NPTU) in Taiwan draws from semi-structured interview data with master's students who encountered KWL in their reading courses. Thematic analysis was employed not only to evaluate the effectiveness of KWL in the case but also to explore reading instruction in its more general aspects. The study's findings suggest KWL promotes enhanced engagement, reflective thought, and the integration of previous knowledge with new information. Still, participants noted some difficulties—particularly around setting clearly defined learning objectives and synthesizing essential information. Within these constraints, KWL proves to be a useful metacognitive framework in teacher education. The research argued for the application of structured approaches such as KWL to develop sophisticated reading strategies and to stimulate active learning. Subsequent research could explore the use of digital tools to broaden the application of KWL in diverse cultural and linguistic classroom settings.

**Keywords:** *KWL strategy; metacognitive strategy; pre-service teacher; Taiwanese; reading.*

### INTRODUCTION

The recent focus on cultivating students' comprehension skills has prompted teachers to look for strategies that foster critical thinking and productive participation. One of the more popular ones is the KWL (Know-Want to know-Learned) strategy which captures the process of prior knowledge activation, goal setting, learning reflection, and new information assimilation (Susana & Rojabi, 2025; Yan et al., 2025). The KWL strategy is prevalent in reading instruction as it promotes higher order metacognitive thinking and aids comprehension by building knowledge constructs (Danlami et al., 2024; Marpaung, 2023; Sari et al., 2023). Then, Taiwan considers the English language as an important part of the curriculum, with reading skills being one of the foremost areas of concern at all levels of education. However, despite the emergence of more learner-centered approaches such as the KWL strategy, not

much is known about the perceptions and the realities of implementations of pre-service teachers regarding these strategies in actual classroom settings (Rokhim et al., 2024; Rositasari et al., 2024). From the perspective of a K12 educator, pre-service teachers are key to the development of sound pedagogical approaches, and their perceptions are important to assess the feasibility of instructional designs.

Furthermore, Reading strategies are not simply ancillary aids; they are the cognitive engines that fuel comprehension processes. They allow readers to self-monitor construction of meaning and therefore foster greater interaction with the texts (Erawan, 2023; Saepudin et al., 2024; Suparman, 2024). Some core strategies include recalling prior knowledge, making inferences, summarizing, and asking questions which serve as mental constructs for meaning building (Fiorella, 2023; Lechuga et al., 2024; Meylani, 2024). Their benefits are well

documented, and provided reading strategies are used, understanding not only improves, but so does critical and higher order thinking (Fiorella, 2023; Hasnah et al., 2024; Susongko et al., 2024). Thus, strategically reading restructures mindless text-typing to purposeful analysis of graphical information systems.

Then, the effective reading goes beyond the mechanical skill of word recognition, requiring the application of critical thought, inference, and systematic information synthesis across diverse domains (Ghafar, 2024; Pratama et al., 2024; Saputra & Al Haddar, 2024). Moreover, reading is more than a sedentary endeavor; it shapes a person's academic and professional career paths. It is through this framework that Stanovich's Matthew Effect makes sense (X. P. Zhang & Zhang, 2025); skilled readers gain chronic advantages where knowledge, vocabulary, and mental flexibility are acquired with reading, while readers with limited skills face chronic hurdles and stagnate both academically and personally. Furthermore, strategic and purposeful instruction of reading promotes metacognitive awareness where students actively evaluate their understanding and apply appropriate engagement with complex texts (Spjeldnæs & Karlsen, 2024). Improving reading, therefore, is not only about raising literacy rates; it's about freeing mental faculties and lifting intellectual mobility in a knowledge economy (Dennis et al., 2024).

As reading experts have illustrated, the foundational cultivation of learners' comprehension skills hinges on the mastery of reading techniques. Of all the strategies designed and utilized in teaching, the KWL strategy is perhaps most noted for its ease of use and flexibility as well as its cognitive benefits (Alwi et al., 2024; Tegegne & Mezgebu, 2024). This three-phase model requires learners to incorporate self-reflection and prior knowledge, which in turn enables them to set specific reading goals, actively interact with texts, and evaluate what they have learned. Such an approach goes beyond a mere procedure; it is one that deeply involves metacognitive knowledge, the capacity of a reader to actively manage One's thinking while reading. As point out (W. Zhang & Lian, 2024), metacognitive strategies enable control over plan, monitoring, and evaluation of understanding processes. In other words, KWL and similar strategies construct autonomous thinking and critical analysis as cognitive scaffolding. As these strategies become part of the reading curriculum, comprehension improve alongside the developing

skills of reading for life (Sadriiddinovna, 2025; Yunisa & Lubis, 2024). With that in mind, these practices are not merely advantageous; they are fundamental in fostering self-directed, reflective learners across educational frameworks. Integrating strategic reading practices into instruction is not an optional enhancement; it is critical.

Moreover, the KWL strategy changes the reading KWL practices to be more active by introducing an objective for reading which goes beyond merely receiving information. It makes reading a cognitive task<sup>22</sup> (Alhidri et al., 2025). Readers are guided to activate prior knowledge (K) for which objectives (W) have been set previously, and Evaluate (L) what has been learned later. This W set helps the readers not just understand better, but also promotes self-awareness and self-regulatory strategies in reading (Prasetya, 2024). By prompting learners to interrogate their own thinking, KWL charts support self-directed learning by making it possible for the learners to integrate content, generate questions, and critique information. In addition, this strategy promotes differentiated teaching, so it can be implemented in various educational settings and subjects. It is especially effective in literacy development, particularly for struggling readers, because it allows them to integrate their personal experiences with the content (Ng et al., 2024). The KWL chart's visual representation also assists in thoughts organization, which enhances retention and recall. If applied systematically, students can develop sustained reading behaviors and increase self-directed learning through the KWL strategy as learners are always in control of their learning process and cultivate inquiry-based learning (Honold, 2025). So, it can be said that the KWL strategy is not just a teaching method; rather, it facilitates independent, intentioned, and analytical reading.

Despite the widespread recognition of the KWL strategy as an important component of reading instruction, not much is known about the perceptions of pre-service teachers in Taiwan regarding its use and effectiveness in English reading classrooms. There are gaps pertaining to their awareness of the strategy, how they gauge its influence on learners' comprehension skills, and the practical limitations they face in planning or implementing it in their teaching. Gaining these understandings is important for shaping teacher training programs so that they can more effectively prepare teachers to use appropriate teaching techniques in multi-faceted classroom

environments. An expanding body of research emphasizes the effective use of the KWL (Know, Want to Know, Learned) strategy in reading instruction for bilingual students. KWL is more than just a reading strategy; it is a powerful framework for dynamic, student-centered learning that fosters reflection and engagement with learning in non-native languages. As noted by Bangkhadara et al. (2024), this strategy enhances comprehension while simultaneously encouraging readers to go beyond passive thinking; they must actively recall information, set objectives, and reflect on what newly gained information reinforces. In the same vein, Namgay and Sakulwongs, (2024) reported that the KWL method encourages capturing learners' activity, autonomy, mastery, and advanced thinking skills such as higher-order analysis, synthesis and evaluation. Because of its flexible structure, this approach enables meaningful interactions with reading texts, which makes it ideal for multilingual classrooms. Moreover, the KWL chart allows teachers to capture formative assessments and develop responsive differentiated instruction immediately. Therefore, this approach is more than a comprehension aid; it transforms students' literacy and cognitive capabilities.

## METHOD

This study employs a qualitative research design to explore the perceptions of Taiwanese pre-service teachers regarding the use of the KWL (Know-Want-Learn) strategy in enhancing their reading development. A qualitative approach is appropriate as it allows for an in-depth exploration of participants' experiences and insights, aligning with the research objectives of understanding their perspectives on the strategy's effectiveness (Creswell, 2006). Specifically, the study adopts a phenomenological design, which is a qualitative research approach aimed at exploring the lived experiences of participants. Phenomenology seeks to understand how individuals make sense of their experiences and interpret the world around them. By employing this design, the study aims to uncover the essence of participants' interactions with the KWL strategy, their perceptions of its effectiveness, and how it influences their reading practices.

Furthermore, the participants in this study were 10 pre-service teachers enrolled in the Master's program in Education at National Ping Tung University (NPTU) in Taiwan. The participants, aged between 20 and 30 years, were selected through purposive sampling, a technique

commonly used in qualitative research to ensure participants have relevant experience with the phenomenon under study. Seven of the participants were female, and three were male.

These students were actively engaged in English reading tasks and had a strong interest in enhancing their reading comprehension skills. Furthermore, they are prospective educators in Taiwan, with a focus on pedagogy and education, ensuring that they are equipped with both the academic background and professional aspirations relevant to the study of the KWL strategy's impact on reading development. The participants were recruited through direct invitations from faculty members, ensuring a diverse range of perspectives within the selected group.

The next, the data for the study was gathered through semi-structured interviews which provided comprehensive understanding (Adams, 2015) of the experiences of Taiwanese pre-service teachers concerning the KWL strategy. This method allowed exploration of some themes while still achieving the purpose of the study. An interview guide based on numerous readings on the KWL strategy was designed for pre-service teacher education in Taiwan. Reflections invited included their experiences with the KWL strategy, its impact on reading comprehension relative to other strategies, as well as strengths and challenges faced during implementation. Each session was conducted in English and was approximately 45 minutes long. They were recorded with the participants' consent. To enhance the credibility of the data, the recordings were transcribed word by word and a second qualitatively knowledgeable researcher checked some of the transcripts. This thorough process enhanced not just the accuracy of the findings, but their interpretation regarding the day-to-day use of the KWL strategy in teaching practice.

The interview data was analyzed through Clarke and Braun (2015) thematic analysis which provided an orderly approach to uncover the meaningful patterns within data. The analysis began with reading and familiarization, which was followed by the action of coding where the response articulated by the participants and aligned with the research questions were noted. These codes were analyzed for patterns and were arranged into sets of preliminary themes. The themes went through a detailed process of review and refinement to check whether the themes accurately portrayed the participants' experiences along with the research focus. To maintain credibility of the analysis inter-coder reliability

was used by having a second researcher independently code a portion of the transcripts, ensuring that the differing interpretations were discussed openly and resolved through conclusion. Researcher reflexivity was also practiced by way of a reflective journal which helped monitor bias thus making the interpretation of data analyzed more credible. Lastly, the refined themes were placed into thematic categories which enabled findings from the analysis to be presented effectively and aligned with the goals of the study while ensuring sufficient depth.

The last, this study received ethical approval from the Institutional Review Board at NPTU. Before data collection, all participants were informed about the study's objectives, their voluntary participation, and their right to withdraw at any stage without consequences. Informed consent was obtained from each participant before the interviews commenced. To ensure confidentiality, participants' identities were anonymized in both the transcripts and the reporting of findings. All recorded interviews and transcripts were securely stored in password-protected files, accessible only to the research team.

## **RESULTS AND DISCUSSION**

This section presents the findings derived from the interviews with ten pre-service teachers at National Ping Tung University (NPTU). The participants shared their perceptions of the KWL strategy, focusing on comparisons with previous reading strategies, the effectiveness of the KWL method, its strengths and weaknesses, and its ability to connect prior knowledge with new information. The analysis followed a systematic coding process as described above, and the findings were categorized into key themes. These themes provide a comprehensive understanding of the participants' experiences with the KWL strategy, highlighting its impact on reading comprehension, its advantages and challenges, and how it facilitates meaningful connections between prior knowledge and new learning.

### *Comparison between KWL and other strategies*

Most respondents reported a predisposed habit of reading without any purposeful strategies, relying instead on a more passive and chaotic approach. A good number of them mentioned starting from the beginning of texts with no concrete plan, oftentimes feeling lost or overwhelmed mentally, especially with complicated texts. Conversely, the application of the KWL (Know – Want to Know – Learned) framework considerably altered their

reading processes. It was reported by study participants that their reading objectives became much clearer and that the strategy enhanced engagement owing to improved comprehension, making it a more structured reading process, as Student 2 explained:

"Before using KWL, I would just start reading without a clear direction. Sometimes, I would struggle to understand the main points, and by the end, I would forget much of what I read. But with KWL, I now set objectives before reading, which makes me more engaged and aware of what I need to focus on. It feels like I have a roadmap while reading."

Similarly, Student 3 emphasized the importance of reflection:

"What I like about KWL is that it makes me pause and think. It's not just about reading but about connecting the content with my own thoughts and experiences. This process deepens my understanding and helps me retain information better."

The student statements substantiate the effectiveness of the KWL strategy (Know–Want to know–Learned) on the learners' comprehension and involvement in reading. The first student reflects on the cognitive disengagement and lapse during reading as a result of lacking a set purpose. Prior to KWL, they floundered without purpose, failing to remember significant details. Nevertheless, KWL helped set objectives which enhanced focus and involvement through the engagement phase. Through the processes of what is already known and what is desired to be learned, the student feels better supported, like having a guidance system during the reading process. The same applies for the second student who emphasises the KWL strategy promoting enhanced self-thought. Instead of passive consumption, they are stimulated to think and actively relate the information to their own experiences. Such active thinking not only enhances comprehension, but also memorising information. To sum up, the reflections of both students show that KWL assists the readers by scaffolding the reading process and shifting it from being a mechanical, passive activity to engaged learning.

Furthermore, the KWL strategy has transformed their approach to reading from passive to active engagement. The student previously focused on comprehending the basic level of a text's content. Nevertheless, after applying the

KWL method, their reading became more reflective and self-involved. The student engages with the material differently now, as he actively integrates the text with his experiences, interests, and academic background which make it much more meaningful. This transformation, in addition to improving comprehension, deepens thinking and information retention for a long period of time. This indicates that KWL helps readers change for the better with regard to becoming active and thoughtful learners. This is line with Student 7 highlighted a shift in focus:

"My previous reading approach was purely about understanding the content, but KWL has changed that. Now, I actively think about how the article relates to me, my experiences, and my studies. This connection makes reading more meaningful."

A critical aspect of this research is the importance of systematic reading strategies, especially the KWL strategy, in improving the reading comprehension skills of students. Most participants understood that the KWL framework offered greater structure, achieved something, and was metacognitive in nature compared to their habitual reading, which was unstructured devoid of engagement. This observation resonates with (Samarng, 2023) introduction of the KWL strategy, which sought to activate prior knowledge while setting specific learning intentions. Notably, some participants, including Student 3 and Student 7, pointed to the reflective nature of the KWL model as transformative. Participants reported being asked to recall what they knew, set learning objectives, and subsequently assess knowledge gained changed how they interacted with texts in a way that was more engaged and that was beyond surface level (Somadayo et al., 2024).

These reflections support (Murphy, 2024) reasoning that metacognitive strategies, particularly those involving reflection in active forms, are critical in achieving sophisticated understanding and retention of information in long-term memory. With the KWL strategy, reading is organized into pre-, during-, and post-reading activities, which shift the learner from being a passive recipient to an active constructor of meaning. This approach is beneficial for engagement and comprehension on a cognitive level but also facilitates the development of more advanced thinking skills (Chimwong et al., 2024). In addition, responses given by the participants imply that the strategy functioned not only as a

reading aid but also as a form of cognitive support that enabled them to tackle complicated texts more independently and with greater self-confidence. The purposeful act of noting down ideas and questions ahead of reading stimulated inquiry that helped sustain motivation throughout the reading endeavors (Shen et al., 2025). In the last reflection phase, participants reported feeling their learning had been completed, which helped reinforce learning and provided a sense of clarity alongside achievement. Such findings further corroborate emerging research highlighted recently about the effectiveness of learner-centered methods combined with strategically tailored reading procedures in literacy advancement, especially in contexts where the second language is used (Muratovna, 2024).

#### *Effectiveness in improving reading comprehension*

All participants recognised that the KWL strategy positively enhances their reading comprehension skills. They noted that this strategy significantly improved interactions with texts on a deeper level and cognitively. For example, the goals set within the pre-reading phase prompted learners to recall information and set concrete learning objectives which they strived to achieve. The reflection component allowed them to consolidate understanding, monitor progress, and evaluate how well their questions had been answered during and after the reading. This structured approach and KWL strategies deepened understanding alongside fostering self-awareness of the cognitive processes involved. Participants became more confident and capable of navigating sophisticated texts, transforming passive reading into an energised learning endeavour rooted in active engagement, as Student 4 noted:

"One of the biggest changes I noticed was how quickly I could grasp the key points of an article. Before, I would read and reread paragraphs without fully understanding, but now, because I set goals and anticipate what I need to learn, everything becomes clearer."

Then, the immense influence of implementing the KWL strategy on their learning progress. Beginning with what students Already know and what they Would like to know means that they were not read for information in a passive manner. Rather, they work to answer their questions. This method improves focus and enhances recall of vital content. For Student 8, KWL changes reading from

a mechanical task into a purposeful, deep learning endeavour, as Student 8 echoed this sentiment:

"When I use KWL, I don't just read blindly. I actively look for answers to my initial questions, which helps me focus on the most important aspects. I also find it easier to remember the content later."

Furthermore, Student 5 elaborated on the process:

"The 'Know' stage is particularly useful because it forces me to activate my prior knowledge. I list what I already know about the topic, which prepares my mind for learning. Then, in the 'Want to Know' stage, I set reading goals, making the process more purposeful. Finally, the 'Learned' stage helps me consolidate everything and reflect on gaps in my understanding."

This responses reflect that applying the KWL strategy helps improve students' reading comprehension skills. Since it stimulates learners to invoke their prior understanding, strive towards meaningful learning outcomes, and evaluate new information gained from the text engaged at a higher level cognitively, this helps them marshal orderly and systematically build interrelationships between current knowledge and the information acquired. These findings support the body of literature which has documented the effectiveness of goal setting prior to reading, reflection after reading, and evaluating during the activities in relation to focus, retention, and higher-level thinking or cognitive skills. KWL is therefore a potent instructional framework in reading that nurtures self-sufficient and strategic students who can skilfully navigate sophisticated texts. Its features frame understanding in real time while ensuring enduring academic development in the subjects, provided that the learners grasp the central ideas vividly. When KWL is used during reading activities, students are able to be active participants in the learning journey, therefore improving motivation alongside metacognition.

The results of this research show that the KWL strategy improves engagement in the active reading portion of the assignment during the pre and post reading activities. Participants reported that KWL charts in particular kept them on track and helped foster comprehension, by encouraging goal-oriented reading. This result supports literature concerning the influence of goal-directed comprehension and self-questioning on reading comprehension (Dewitz & Graves, 2024). One

participant (Student 4) specifically stated that the KWL framework assisted in the identification of key concepts within a text, which supports assertion that pre-reading activities such as predicting and questioning aid scaffolding, allowing learners to interact meaningfully with texts.

Furthermore, the strategic engagement catalyzed by KWL applies to Vygotsky in Marpaung (2023) explain about sociocultural theory about the active role of learners participating in the co-construction of knowledge. The act of reflecting prior knowledge or setting personal objectives positions students as active agents in the process of meaning making. This phenomenon, while personalizing the reading experience also enhances metacognitive awareness, whereby learners measure understanding and adapt their approaches continuously (Williams et al., 2023). In essence, the KWL strategy transforms reading into a dynamic and self-regulated activity. Students are able to take control of the learning process through the integration of prior knowledge, the setting of some goals, and by reflecting on new information in a more critical way. This prominent pedagogical value of KWL demonstrates learner comprehension and autonomy—the two crucial pillars of effective literacy instruction. Thus, the reading curriculum should embrace its incorporation as a tactical step towards fostering reflective as well as independent readers.

#### *Strengths and weaknesses of the KWL strategy*

The KWL strategy has received positive reviews for the active, critical thinking, and goal-oriented approaches to reading that it engages. By asking learners to reflect on what they know, what they plan to learn, and what they have learned, the strategy helps them transform reading into action instead of a mere passive activity. Participants almost always reported that KWL helped in making reading more interesting and relevant as they were able to connect prior knowledge with information that was newly presented to them. This framework enables learners to comprehend information in a complex way and become metacognitive where their controlling thought processes become strategic learners. In addition, the KWL chart's structured nature assists learners in organising, synthesising, and evaluating information in a concrete manner throughout the reading process. Consequently, the KWL strategy stands out as a robust instructional approach that adds value to the educational process while supporting retention of content throughout various

subjects over long periods of time. As Student 6 shared:

"What I like most about KWL is that it bridges the gap between what I already know and what I am learning. When I read about new teaching methods, for example, I can relate them to the traditional approaches I studied before. This comparison makes learning more effective."

However, despite these strengths, some participants noted challenges in using the KWL strategy effectively. For instance, Student 1 pointed out difficulties in setting goals:

"Sometimes, I struggle to determine the goal of the reading. If the topic is unfamiliar, I don't always know what questions to ask in the 'Want to Know' section, which makes it harder to engage."

And also Student 7 added:

"While KWL is great for guiding my reading, it doesn't teach me how to extract key points from complex articles. I still need additional strategies to summarize information effectively."

The students' comments highlight two major problems with the KWL strategy the context of reading comprehension. First, some students, such as the first one, struggle with identifying the purpose for reading and creating purposeful questions in the 'Want to Know' section when the topic is unfamiliar. This kind of frustration can diminish their motivation and reduce their ability to engage with the text. Also, as Student 7 notes, even though the KWL strategy helps to some extent in guiding the reading process by fostering self-reflection and questioning, it lacks mechanisms for identifying and summarising critical components of intricate texts. That suggests KWL is useful to some extent for establishing the reading goals and summarising learning outcomes and aims, but it needs to be combined with other approaches that support information retrieval and integration—through note-taking, skimming, scanning, and summarising frameworks—so learners can more effectively navigate and extract meaningful content from challenging texts.

Furthermore, Student 10 mentioned:

"I think KWL is more suitable for advanced readers. For those who have limited vocabulary or struggle with comprehension, setting goals might

be challenging. It might be helpful if teachers guide students through the process."

Based on the statement above, the KWL strategy supports very advanced learners as it prompts them to think critically while organising reflections on what they already know, what they hope to accomplish, and what was gained from the lesson. Conversely, in the case of students with limited vocabulary or those who struggle with comprehension, identifying what they want to know may be too difficult as a goal. Because of this, students might feel lost or not know how to express their goals due to lacking the language skills which is not empowering. For these reasons, it is essential that all teachers aid students in lower grades by implementing clear and supported instructions, such as walking the students slowly through the KWL process. This would enable students to know how to use the strategy, increase their vocabulary, and use the objectives in learning to their maximum potential. Thus, this balance of guidance can give all learners a chance to easily engage with the work to motivate them immediately.

The KWL strategy has shown efficiency in improving reading comprehension, but still presented a few challenges in execution during the course of the study. Some of these challenges were of a nature that could be particularly detrimental to receiving the full benefit of the strategy's impact. Consider Student 1, who could not set specific reading goals and bring them to mind during the first step of the process. Student 7 also had difficulty identifying key ideas within texts, which suggests that some readers may not possess developed strategic reading skills. Rahmasari et al. (2024) seems to capture the essence of this finding when they argue that, while the KWL strategy fosters thoughtful interaction with texts, it is still not effective because novice readers are often not provided with adequate support.

In addition, Student 10 pointed out the need to structure lessons differently for stronger provision of accessibility to all students and remarked that not all students at lower levels of language ability may find the strategy very useful. This is in keeping with Dlundla et al. (2024) observation that the use of metacognitive techniques such as KWL requires strong teacher guidance for its application to be effective, especially for less skillful or slow readers who have no experience using these strategies (Nanda & Pratama, 2021). All these viewpoints combined seem to suggest that the success of the KWL strategy is dependent predominantly on learners' language proficiency,

familiarity with comprehension processes and pedagogical strategies which reveal the gaps in expectable and existing outcomes, thus necessitating well-defined didactic adjustment.

*Connecting prior knowledge with new information*

The usefulness of the KWL strategy in linking prior knowledge and information brought up by new lessons was a common occurrence with all the participants. We noted that this bridging interplay was instrumental towards understanding as well as the remembrance of newly learned material. The KWL strategy helps learners prepare for lessons by activating existing cognitive structures, increasing the chances of understanding new content and promoting learning. The action of engaging with prior knowledge through questioning and self-reflection enables learners to process and retain information more deeply. It promotes active engagement, critical thought, and improved metacognition, resulting in an enriched learning experience. Also, the KWL strategy facilitated prolonged effort toward the tasks which makes it effective for the use in the classroom and for self-study. The advantages shared by participants illustrate the importance this strategy has in the modern educational landscape as a fundamental didactic instrument. As Student 3 emphasized:

"Whenever I read something new, I now actively think about what I already know that relates to the topic. This makes it easier to absorb and remember information because I am not just memorizing facts—I am integrating them into my existing knowledge."

Furthermore, student 6 provided a concrete example:

"When learning about curriculum changes, I was able to compare my prior understanding of traditional teaching methods with new approaches like project-based learning. This made the new information easier to grasp and more relevant to my studies."

Similarly, Student 10 discussed an unexpected benefit:

"Using KWL has helped me develop my media literacy. When I read news articles, I compare what I already know about the topic with new perspectives presented in the text. This allows me to analyze information more critically."

The results highlight how effective the KWL strategy is in promoting cognitive engagement as it activates students' prior knowledge and connections to new content meaningfully. It was noted that the participants had favorable perceptions of the KWL approach, considering it effective in enhancing reading comprehension, fostering active participation, and promoting deeper reflection. The strategy's format, which centers around goal setting, inquiry, and reflection after the reading, was lauded as helping provide a more organized approach to reading.

Concerns, however, were raised on its usability for students with limited reading ability. In these cases, the strategy's self-regulatory and metacognitive elements may prove too difficult and, therefore, necessitate more instructional intervention from the teachers. Stronger literate students were observed to navigate the strategy independently, while poorer literate students required active facilitative teaching. With this in mind, KWL use may be more effective in some contexts than others depending on the student's preparedness and the design of instruction. Further investigation would be useful on varying standards adapted to KWL to allow wider inclusivity for different learners.

One of the key advantages of the KWL strategy, as stated by all participants, was its ability to connect prior knowledge with new information. In this case, the 'Know' (K) phase helped to mobilize the cognitive structures of learners which, in turn, deepened their engagement with the content. As an example, Student 6 integrated cognitive components by relating the general teaching methods to specific sections of the existing curriculum and evidencing how the KWL strategy scaffolds new information as it is assimilated. This is in step with Ausubel's theory of meaningful learning (Bryce & Blown, 2024) which states that learning is more effective when it is linked to something that the learner has previously encountered.

Moreover, the KWL approach's recursive model, (Chimwong et al., 2024) in particular the reflective component of the 'Learned' (L) stage, fits nicely within the framework of retrieval practice model. This model illuminates the teaching importance of recall as it relates to memory strengthening and the clarifying of concepts. The KWL framework highlights the importance of iterative reflection and self-assessment, thereby reconceptualizing learning as an active and continuous cycle, and improving students'

retention and understanding over time (Awalia et al., 2025; Charusapsodsai & Intasena, 2024).

The KWL strategy's effectiveness as an instructional approach to improve reading comprehension by integrating prior knowledge with newly learned information is clear from the findings. However, its teaching effectiveness is limited without purposeful teacher guidance in goal directed reading and selection of relevant text elements that need active engagement with the texts. To this end, the inclusion of collaborative reading such as peer-led and teacher-guided discussions has the potential to improve student engagement and higher-order thinking skills in a significant way. These approaches embrace the cooperative learning model that highlights the cognitive aspect of social interaction and meaning construction (Zhou & Colomer, 2024)

In addition, combining KWL with other evidence-based practices like reciprocal teaching and think-aloud, enhance the student's self-regulation, critical literacy skills, and metacognition (Purwaningsih, 2024). The effective use of those described strategies stimulates students and produces a differentiated learning atmosphere that attends to a variety of learner needs while promoting advanced understanding.

## CONCLUSION

This study shows that the KWL (Know–Want to Know–Learned) strategy has a considerable impact on the reading habits of Taiwanese pre-service teachers by changing the reading from a passive activity to an active one that is systematic and goal-driven. To address the research questions, the study shows how KWL contributes to reading comprehension through reflective thinking, recall of information, and meaningful learning goals. Participants regarded the strategy as useful in helping them to overcome cognitive barriers to deeper engagement with the text, thus improving retention of information. Some barriers were identified, especially with participants who had rudimentary reading skills or knowledge of the subject matter, who found it difficult to pose questions and identify salient details. These constraints suggest that although the KWL strategy has strong potential as a metacognitive tool, its effective use may be restricted to the degree of learner readiness and availability of proper instructional scaffolding. Within the context of KWL, the results indicate that the strategy is useful in supporting teacher education programs aimed at developing self-sufficient and strategically competent readers. Building on these findings,

further study could look into the use of the KWL strategy on a wider scope of learners such as undergraduates and in-service teachers to determine its flexibility and impact in differing educational settings. Studies combining KWL with technology could further show the modern application of KWL and its enhancement through technology in today's classrooms. Additionally, for students with lower reading skills, further developing the strategy by merging KWL with other instructional methods such as think-alouds, reciprocal teaching, or summarization is necessary. Employing quantitative or mixed-methods designs in the subsequent studies could deepen understanding of the impact from the KWL strategy, strengthening claims of generalizability and corroborative evidence. These strands present strong avenues to further explore the sophisticated systems of strategic Reading as well as adapt the KWL mechanism for wider universal use.

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## REFERENCES

- Adams, W. C. (2015). Conducting Semi-Structured Interviews. In E. N. Kathryn, P. H. Harry, & S. W. Joseph (Eds.), *Handbook of Practical Program Evaluation* (4th ed., pp. 492–505).
- Alhidri, W., Tofani, D., Ratnaningsih, A., & Arifin. (2025). Peningkatan Kemampuan Pemahaman Membaca Melalui Metode KWL (Know, Want to Know, & Learned) Pada Materi Cerita Rakyat Kelas 4 SD Negeri Turus. *Jurnal Pendidikan Guru Sekolah Dasar*, 2(2), 10. <https://doi.org/10.47134/pgsd.v2i2.1357>
- Alwi, N. A., Kenedi, A. K., Arwin, Anita, Y., Handrianto, C., & Rasool, S. (2024). Socio-Cultural Approach through Digital Teaching Modules: A Solution to Improve Beginning Reading Skills in Elementary Schools. *Journal of Ecohumanism*, 3(7), 4366–4377. <https://doi.org/10.62754/joe.v3i7.4552>
- Awalia, A. N., Carlian, Y., & Mahmud, M. R. (2025). Improving the Reading Comprehension Skills of Fourth Grade MI Students Through the Know-

- Want to Know-Learned (KWL) Strategy Assisted by Series Picture Media. *MITRA PGMI: Jurnal Kependidikan MI*, 11(1), 27–35. <https://doi.org/10.46963/mpgmi/v11i1.2351>
- Bangkhadara, W., Wilang, J. D., & Newprasit, N. (2024). Impact of SQ4R on reading comprehension of university students in an English for specific purposes (ESP) course. *Journal of Applied Studies in Language*, 8(2), 137–147. <http://ojs2.pnb.ac.id/index.php/JASLhttp://ojs2.pnb.ac.id/index.php/JASL>
- Bryce, T. G. K., & Blown, E. J. (2024). Ausubel's meaningful learning re-visited. *Current Psychology*, 43(5), 4579–4598. <https://doi.org/10.1007/s12144-023-04440-4>
- Charusapsodsai, K., & Intasena, A. (2024). Integrating KWL Plus Technique with Mind Mapping to Develop Reading Comprehension Skills of Thai 9 Graders. *Higher Education Studies*, 14(4), 235. <https://doi.org/10.5539/hes.v14n4p235>
- Chimwong, C., Naphatthalung, N., & Khattiyamarn, W. (2024). The effects of collaborative strategic reading and KWL plus technique on reading comprehension and English learning achievement. *Kasetsart Journal of Social Sciences*, 45(3), 1063–1068. <https://doi.org/10.34044/j.kjss.2024.45.3.35>
- Clarke, V., & Braun, V. (2015). Thematic Analysis. *Journal of Positive Psychology*, 15(1), 10–17.
- Creswell, J. W. (2006). *Qualitative Inquiry & Research Design*. Sage Publications.
- Danlami, K., Ginga, U. A., Aliyu, A. S., Umahaba, R. E., & Tsoho, M. (2024). Impact of the Know-Want-Learn (KWL) Strategy on Geometry Performance Among Upper-Basic Students in Nigeria. *Journal of Educational Studies in Science and Mathematics*, 3(2), 87–104. <https://doi.org/10.29329/jessm.2024.1110.3>
- Dennis, C. A., Aubrey-Smith, F., Alvarez, I., Waterhouse, P., & Ferguson, G. (2024). Professional doctorates reconciling academic and professional knowledge: towards a diffractive re-reading. *Higher Education Research and Development*, 43(7), 1525–1539. <https://doi.org/10.1080/07294360.2024.2339844>
- Dewitz, P., & Graves, M. F. (2024). Reevaluating and Restructuring Comprehension Strategy Instruction. *Reading Teacher*, 78(1), 17–26. <https://doi.org/10.1002/trtr.2308>
- Dludla, S., Govender, S., & Mhlongo, H. (2024). Teaching strategies used by English First Additional Language teachers in teaching reading for comprehension. *Edelweiss Applied Science and Technology*, 8(6), 6717–6729. <https://doi.org/10.55214/25768484.v8i6.3446>
- Erawan, W. (2023). Upaya Meningkatkan Hasil Belajar Bahasa Inggris Tema Congratulations Menggunakan Strategi KWL (Know, Want to Know, Learn). *Jurnal Impresi Indonesia*, 2(6), 558–573.
- Fiorella, L. (2023). Making Sense of Generative Learning. In *Educational Psychology Review* (Vol. 35, Issue 2). Springer. <https://doi.org/10.1007/s10648-023-09769-7>
- Ghafar, Z. (2024). A Critical Analysis of Reading Comprehension Tactics: Theoretical and Educational Implications. *International Journal of Higher Education Pedagogies*, 5(1), 31–43. <https://doi.org/10.33422/ijhep.v5i1.613>
- Hasnah, Y., Ginting, P., Supiatman, L., Kharisma, A. J., & Siahaan, H. S. (2024). How Do Locally Produced EFL Textbooks Endorse Critical Thinking Skills in Indonesia? A Content Analysis. *Journal of Language Teaching and Research*, 15(1), 190–200. <https://doi.org/10.17507/jltr.1501.21>
- Honold, A. (2025). Exploring Students' Problem Framing in Historical Inquiry: Towards A Framework for Research and Instruction. *Interdisciplinary Journal of Problem-Based Learning*, 19(1), 1–31. <https://doi.org/10.14434/ijpbl.v19i1.36429>
- Lechuga, M. T., Ortega-Tudela, J. M., & Gómez-Ariza, C. J. (2024). Retrieval-based concept mapping makes a difference as a retrieval practice activity: a study with high school students. *Frontiers in Education*, 9, 1–12. <https://doi.org/10.3389/feduc.2024.1287744>
- Marpaung, F. A. (2023). The K-W-L (Know-Want-Learned) Strategy for Enhancing Reading Comprehension Skills of 7th Grade Students at SMP Negeri 1 Tanjung Harapan. *Edelweiss: Journal Of Innovation In Educational Research*, 1(1), 24–33. <https://doi.org/10.62462/edelweiss.v1i1.4>
- Meylani, R. (2024). Innovations With Schema Theory: Modern Implications For Learning, Memory, And Academic Achievement. *International Journal For Multidisciplinary Research*, 6(1), 1–33. <https://doi.org/10.36948/ijfmr.2024.v06i01.13785>
- Muratovna, K. A. (2024). Effective Pedagogical Approaches in English Language Teaching: Insight from A Kazakhstani Educator. *Eurasian Science Review*, 2(4), 105–111.
- Murphy, D. H. (2024). Responsible remembering: The role of metacognition, forgetting, attention, and retrieval in adaptive memory. *Psychonomic Bulletin and Review*, 32(1), 156–175. <https://doi.org/10.3758/s13423-024-02554-9>
- Namgay, K., & Sakulwongs, N. (2024). The Development of English Reading Comprehension Skill Using Flipped Classroom with Poems Among Grade 6 Bhutanese Students. *THAITESON Journal*, 37(2), 96–118.
- Nanda, D. W., & Pratama, D. (2021). Exploring The Application of KWL Strategy Towards Students' Reading Comprehension: Teachers' Perceptions. *Journal of English Language Studies*, 6(2), 185–194. <http://jurnal.untirta.ac.id/index.php/JELS>

- Ng, D. T. K., Xinyu, C., Leung, J. K. L., & Chu, S. K. W. (2024). Fostering students' AI literacy development through educational games: AI knowledge, affective and cognitive engagement. *Journal of Computer Assisted Learning*, 5(1), 2049–2064. <https://doi.org/10.1111/jcal.13009>
- Prasetya, R. E. (2024). The Effectiveness of Know-Want-Learn Chart Strategy Combine with Picture on Reading Comprehension. *Journal of English Teaching, Literature, and Applied Linguistics*, 8(2), 185–192. <https://doi.org/10.30587/jetlal.v8i2.6242>
- Pratama, A., Putri, R. R., & Fitriah, Y. (2024). Students' Critical Thinking on Reading Comprehension Based on Contextual Reading Material: An Experimental Study. *SALEE: Study of Applied Linguistics and English Education*, 5(1), 258–270. <https://doi.org/10.35961/salee.v5i1.1097>
- Purwaningsih, E. (2024). The Role of Metacognition in Character Education: A Case Study on Students' Moral and Ethical Formation Strategies. *Society*, 12(1), 1–13. <https://doi.org/10.33019/society.v12i1.617>
- Rahmasari, B. S., Munir, A., & Adi Nugroho, H. (2024). The role of peer tutoring integrated with KWL charts in the development of students' inferential skills. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2335810>
- Rokhim, F., Laeli, A. F., & Mufaridah, F. (2024). The Effect of Using K-W-L Teaching Method on Reading Comprehension in Descriptive Text. *SS&H: Studies in Social Sciences and Humanity*, 1(2), 103–109.
- Rositasari, T., Marliasari, S., Yuliani, S., & Saraswati, D. R. (2024). The Effectiveness of Know-Want-Learn (KWL) Technique to Improve Students' Reading Comprehension. *HOLISTIC: Hospitality and Linguistic*, 16(1), 1–9.
- Sadriddinovna, O. M. (2025). The Educational Impact of The Role of Fiction in Reading and Writing. *International Conference on Linguistics, Literature and Translation*, 33–37.
- Saepudin, S., Pabbajah, M. T. H., & Pabbajah, M. (2024). Unleashing the Power of Reading: Effective Strategies for Non-Native Arabic Language Learners. *Journal of Arabic Linguistics and Education*, 9(2), 109–130.
- Samarng, C. (2023). Effects of Using the KWL Chart on Fostering EFL University Students' Critical Reading. *Parichart Journal, Thaksin University*, 36(1), 182–197. <https://doi.org/10.55164/pactj.v36i1.259611>
- Saputra, D. G., & Al Haddar, G. (2024). Enhancing Reading Comprehension in Education: A Study on the Effective- ness of the SQ3R Method. *Jurnal Ilmu Pendidikan Dan Humaniora*, 13(03), 167–179. <https://journals.ristek.or.id/index.php/jiph/index>
- Sari, K. I., Astrid, A., & Salsabila, M. (2023). Improving Students' Reading Comprehension by Using K-W-L (Know, Want to Know, Learned) Strategy. *Publisher: Yayasan Karinosseff Muda Indonesia*, 3(2), 183–194.
- Shen, B., Weng, F., Jiang, M. Y. C., Zou, D., & Jong, M. S. Y. (2025). Harnessing spherical video-based virtual reality to enhance EFL learners' writing performance and self-regulated learning strategy use. *Computer Assisted Language Learning*, 1(1), 1–47. <https://doi.org/10.1080/09588221.2025.2482148>
- Somadayo, S., Pamuti, P., Wahjuningsih, E., & Husain, S. R. (2024). Comparative Analysis of Students' Reading Ability Based on KWL, CIRC, and DRA Learning Models and Reading Interest. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, 16(2), 817–826. <https://doi.org/10.37680/qalamuna.v16i2.3842>
- Spjeldnæs, K., & Karlsen, F. (2024). How digital devices transform literary reading: The impact of e-books, audiobooks and online life on reading habits. *New Media and Society*, 26(8), 4808–4824. <https://doi.org/10.1177/14614448221126168>
- Suparman, N. S. (2024). Reading Comprehension in the Digital Age: Strategies for STAI Nurul Falah Students Destri Wahyuningsih. *Alsuna: Journal of Arabic and English Language*, 7(2), 191–199. <https://doi.org/10.31538/alsuna.v7i2.5954>
- Susana, S. A., & Rojabi, A. R. (2025). Enhancing EFL students' reading proficiency and engagement through the KWL Strategy in descriptive texts. *Journal of English in Academic and Professional Communication JEAPCO*, 11(1), 37–54. <https://doi.org/10.25047/jeapco.v11i1.5737>
- Susongko, P., Bhandari, R., Kusuma, M., Arfiani, Y., & Pratama, D. (2024). Community Critical Thinking Skills Framework: A Literature Review Study. *Journal of Innovation in Educational and Cultural Research*, 5(1), 35–42. <https://doi.org/10.46843/jiecr.v5i1.978>
- Tegegne, M. T., & Mezgebu, Y. (2024). Effects of Scaffolding Instruction on EFL Students' Awareness of Metacognitive Reading Strategies: From a Socio-Cultural Perspective. *ERJSSH*, 11(2), 23–41. <https://doi.org/10.4314/erjssh.v11i2.2>
- Williams, K. J., Martinez, L. R., Fall, A. M., Miciak, J., & Vaughn, S. (2023). Student Engagement Among High School English Learners with Reading Comprehension Difficulties. *School Psychology Review*, 52(1), 38–56. <https://doi.org/10.1080/2372966X.2020.1868948>
- Yan, S., Sun, D., & Zhou, Q. (2025). Exploring the impact of virtual laboratory with KWL reflective thinking approach on students' science learning in higher education. *J Comput High Education*, 37(1), 89–110.
- Yunisa, Y., & Lubis, A. H. (2024). Improving Elementary School Students' Reading Skills Using Picture Word Cards: How is This Possible?

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- Journal of Indonesian Primary School*, 1(2), 9–18.  
<https://journal.mgedukasia.or.id/index.php/jips>
- Zhang, W., & Lian, R. (2024). The impact of reading metacognitive strategies on mathematics learning efficiency and performance: An analysis using PISA 2018 data in China. *Acta Psychologica*, 246(1), 1–8.  
<https://doi.org/10.1016/j.actpsy.2024.104247>
- Zhang, X. P., & Zhang, M. (2025). The relationship between young children's graphic narrative skills and reading behavior: insights from the Matthew effect. *Educational Research and Human Development*, 2(1), 34–38.  
<https://doi.org/10.61784/erhd3030>
- Zhou, T., & Colomer, J. (2024). Cooperative Learning Promoting Cultural Diversity and Individual Accountability: A Systematic Review. *Education Sciences*, 14(6), 1–15.  
<https://doi.org/10.3390/educsci14060567>