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## **A content-based instruction (CBI) approach to enhancing reading comprehension in professional and academic contexts**

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**Annotation** *The growing need for academic and professional literacy in English highlights the importance of effective reading strategies in Content-Based Instruction (CBI). This study examines how cognitive and metacognitive strategies, such as inference-making, activating background knowledge, self-regulation, scanning, and skimming to improve academic and professional reading comprehension in English as a Second Language (ESL) settings. This review demonstrates that collaborative learning, modelling of reading strategies, and structured pre-reading, while-reading, and post-reading stages. These strategies further enhance critical thinking, confidence, and information processing. The review concludes that integrating reading strategies into CBI is a sustainable approach to advancing L2 learners' academic literacy through the integration of cognitive, metacognitive, and task-oriented reading strategies based on CBI contributes to academic success, better performance in reading proficiency, and strengthens comprehension outcomes. The review highlights and recommends further research to explore on technology-enhanced strategy training and long-term applications across diverse learner groups and instructional contexts.*

**Keywords** *Reading strategies, cognitive, metacognitive, critical thinking, collaborative, scanning, skimming*

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## **Контентно-ориентированный подход (СБИ) к повышению уровня понимания при чтении в профессиональном и академическом контекстах**

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**Аннотация** *Актуальность увеличения потребности в академической и профессиональной грамотности на английском языке подчеркивает важность эффективных стратегий чтения в предметно-интегрированном обучении (Content-Based Instruction, CBI). Данное исследование (или обзор) рассматривает, как когнитивные и метакогнитивные стратегии, такие как формирование умозаключений, активация фоновых знаний, саморегуляция, сканирование и просмотр, способствуют улучшению академического и профессионального понимания прочитанного в условиях изучения английского языка как второго (ESL). Обзор показывает, что совместное обучение, моделирование стратегий чтения и структурированные этапы предтекстовой, текстовой и послетекстовой работы дополнительно развивают критическое мышление, уверенность и*

обработку информации. Обзор приходит к выводу, что интеграция стратегий чтения в CBI является устойчивым подходом к повышению академической грамотности учащихся L2. Такая интеграция когнитивных, метакогнитивных и целевых стратегий чтения, основанная на CBI, способствует академическому успеху, повышению уровня владения чтением и улучшению результатов понимания. Обзор особо отмечает и рекомендует дальнейшие исследования в области обучения стратегиям с использованием технологий, а также долгосрочного применения в различных группах учащихся и учебных контекстах.

**Ключевые слова** Стратегии чтения, когнитивные, метакогнитивные, критическое мышление, совместные, скимминг и сканирование чтение

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## Mazmunga asoslangan instruksiya yondashuvi (CBI) orqali o'qib tushunishni kasbiy va akademik matnlar orqali rivojlantirish

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**Annotatsiya** Ingliz tilida akademik va professional savodxonlikning ortib borayotgan ehtiyoji Mazmunga-Asoslangan Ta'limda (CBI) samarali o'qish strategiyalarining muhimligiga e'tibor qaratadi. Ushbu tadqiqot, xulosa qilish, oldingi bilimlarni faollashtirish, o'z-o'zini boshqarish, skanerlash va skimming kabi kognitiv va metakognitiv strategiyalar Ingliz tili ikkinchi til sifatida (ESL) sharoitida o'qish tushunishiga qanday ta'sir qilishini o'rganadi. CBIga asoslangan yondashuvlarda hamkorlikda o'rganish, o'qib tushunish ko'nikmasini modellashtirish strategiyalari va tizimlangan o'qishdan oldingi mashg'ulot, o'qish vaqtidagi hamda o'qishdan keyingi mashg'ulotlar qismlarini ko'rsatib beradi. Ushbu strategiyalar tanqidiy fikrlash, ishonch va axborotni qayta ishlashni yanada oshiradi. Taqriz shuni xulosa qiladiki, o'qish strategiyalarini mazmunga asoslangan o'qitish (CBI) yondashuviga integratsiya qilish L2 o'rganuvchilarining akademik savodxonligini oshirishda barqaror va istiqbolli metod hisoblanadi. CBI asosidagi kognitiv, metakognitiv va vazifaga yo'naltirilgan o'qish strategiyalarining birgalikda qo'llanilishi akademik muvaffaqiyatga erishishga, o'qish malakasining yaxshilanishiga hamda matnni tushunish natijalarining mustahkamlanishiga bevosita hissa qo'shadi. Taqriz, shuningdek, texnologiyalar bilan boyitilgan startegiyalarni o'rgatish va ularning uzoq muddatli amaliyotlarini turli o'quvchi guruhlari va o'qitish matnlarida o'rganish bo'yicha qo'shimcha taqdiqlarni tavsiya etadi va buning muhimligini alohida qayd etadi.

**Kalit so'zlar** O'qish strategiyalari, kognitiv, metakognitiv, tanqidiy fikrlash, hamkorlikda, ko'zdan kechirish, tez o'qish

## Introduction

Reading comprehension is a language competency that is defined as engaging with a written text through understanding and reflection. Reading is a means of language acquisition that enables target learners to develop their internal knowledge and learning potential, thereby fostering their active socialization. According to Susana Adjei-Mensah et al., given the language threshold required for academic reading, there is a need for an effective teaching methodology that will improve students' language and reading proficiency levels to enhance their learning and, consequently, academic performance (Adjei-Mensah et al., 2023).

An academic definition by Grabe defines reading as a part of academic life that is expected to provide unlimited knowledge from written informational materials, including assignments or tasks necessary for achieving educational success (Grabe, 2009). Exposing target learners to academic and professional reading is an essential stage in communication in a new language. This process involves a great deal of practice and skill, and requires the active contributions of both teachers and language learners.

Seyyed Hossein Kashef states that in reading comprehension, the methods of teaching English learners require implementing a variety of strategies to shape better reading competency in learners' contexts (Kashef, 2014). Comprehension strategy in the reading process through implementing relevant instructions based on the self-regulation process improves reading skills (Lazorenko, 2022).

Susana Adjei-Mensah et al. highlight that, for successful academic achievement, efficient reading is a crucial aspect for students. One reason is that reading helps build cognitive abilities essential for learning (Adjei-Mensah et al., 2023).

## Literature Review

Applying effective professional and academic reading strategies is expected to lead to growth in learners' knowledge, improvement in reading comprehension practices, and increased use of effective instructional practices in academic performance. Suwantharithip claims that better comprehension of the text involves two main strategies: cognitive and metacognitive. Cognition plays an essential role in strategic learning when prior knowledge or schema and domain knowledge are the focus (Suwantharithip, 2015).

Mustopa. A.R. et al hold the view that metacognition and reading comprehension skills are critical for students to achieve learning success and respond to the dynamics of the times. This is based on the nature of metacognition and reading comprehension, both of which are thought processes. In short, metacognition is the process of thinking about thinking. In academic and professional reading contexts, applying metacognitive reading strategies helps language learners raise their awareness of what they are reading and enhance their understanding of their thinking while they read. (Mustopa, 2024)

As cited in Thongwichit N. and Buripakdi A. in his study, Pirsal et al state the view that metacognitive strategies are considered essential in ESP teaching and learning because in the ESP context, it is not only what to learn that plays a vital role in classes, but also how students learn it. Thus, Thongwichit. N and Buripakdi.A study addresses implementing metacognitive reading strategies through a modelling technique in class (Thongwichit & Buripakdi, 2021).

There is some evidence that exposure to reading comprehension from a learner's perspective develops their cognitive skills in an academic context. At this stage of reading, students improve their phonemic awareness, which, in turn, enables them to identify and

recognise individual sounds in spoken words and to apply that knowledge in written form.

Working in groups while reading, students gain more confidence as they have the opportunity to talk and share their opinions (Suwantharathip, 2015). This indicates that collaborative learning is beneficial for both teachers and language learners in achieving academic success. In the process of working collaboratively for academic and professional reading, students improve their reading competencies by applying the strategies they have learnt.

Khoshsima and Samani claim that reading comprehension involves linguistic competence for a productive outcome, simultaneously requiring the mastery of necessary skills and strategies accordingly. They implement the Problem Solving Strategy as an effective and beneficial technique to raise the awareness of students' immediate comprehension competencies in their studies. There would therefore seem to be a definite need to apply metacognitive awareness to develop instructional outcomes. In their comprehensive survey, Khoshsima H. and Samani E. were able to show that integration of strategies encompasses reading tasks, turn to an engaging and productive process (Khoshsima & Samani, 2014).

The relevance of applying Content-Based Instruction is clearly supported by the findings of scientists Ya-Ling, Tsai & Hui-Fang, Shang. The results of their study clearly indicate that enhancement in reading comprehension was achieved by the use of content-based instruction strategies. Researchers state that explicit instruction of reading comprehension skills, teachers' comprehensible input within a variety of activities used in meaningful contexts, activated effective reading engagement in academic performance (Tsai & Shang, 2010).

Applying Content-Based Instruction to improve reading comprehension can be effective by providing resources tailored to learners' levels, background knowledge, and

needs. The scientists' research offers a clear suggestion for helping students develop a concrete comprehension strategy to understand the content effectively.

Interestingly, effective reading strategies were observed in the research by scientists Deborah Yapp et al. They discussed the context of the reading strategy intervention, and they found that prior education appears to influence students' L2 reading comprehension performance. This outcome could be considered a lack of exposure to the level and/or experience with complex academic texts in English during vocational-type studies, with later repercussions for higher education students in their L2 reading. Alternatively, the L2 reading strategies offered in this intervention seemed to work particularly well for students who had previously followed a general secondary-level education (Yapp et al., 2021).

Methods and Discussions. Promoting reading interest and purpose in academic context following reading strategies are considered as relevant and efficient to students' learning process. Developing better comprehension and task awareness inference processes, metacognitive monitoring, pre-reading, while-reading and post-reading strategies, scanning and skimming processing strategies are that allow learners to improve their reading competency.

In the reading comprehension stage, students are supported to integrate textual clues with their prior knowledge, logical reasoning, and understanding of the text. This is referred to as inference, a cognitive process used in reading to achieve better comprehension. In academic and professional reading, inference is the bridge between what the text outlines and what the reader is expected to supply. As cited in Kathryn S. McCarthy 1 and Eleanor F. Yan, McNamara and Magliano state that for better comprehension, readers need to not only process the explicit words and ideas, but to generate inferences that help to create the links across ideas in the

text and to connect the text content with their existing prior knowledge (McCarthy & Yan, 2023). Thus, through inference strategies, students try to reconstruct missing information, predict outcomes in context, infer definitions to improve language acquisition, and additionally interpret graphs or data when explanations are limited.

Sheorey and Mokhtari hold the view that reading strategy is the combination of conscious awareness of strategic reading processes and the actual utilization of reading strategies, which distinguishes skilled from unskilled readers (Sheorey & Mokhtari, 2001). Researchers indicate that to accomplish the text's comprehensive task, the reader must utilize metacognitive knowledge and employ conscious, deliberate strategies. Researchers' studies outline that learners' metacognitive knowledge is influenced by several factors, including previous experiences, beliefs, culture-specific instructional practices, and, in the case of non-native readers, proficiency in L2, and it may be triggered, consciously or unconsciously, when the reader encounters a specific reading task.

Considering the appropriate use of metacognitive strategies opens the door for teachers to provide a concrete, practical technique that encourages the implementation of strategy training through collaborative, reflective learning. This procedure could be adopted as a fruitful feedback after reading time in the classroom. As well as providing questionnaires, other ways, like open-ended questions, talking aloud about the strategies used, have their own advantages. The teacher can also give learners a mini-discussion opportunity to negotiate why and how they are using strategies (Khoshsima & Samani, 2014).

Applying pre-while-post reading strategies in reading comprehension helps students identify key points in the text, develop task-awareness, and illustrate the importance of understanding the text in their academic content. It can be stated that whereas students are exposed to pre-reading strategies,

they become aware of the focal idea of the content beforehand. This process urges student to understand the material and guess the main idea using their background knowledge. By effectively implementing the pre-reading technique, teachers can maintain students' active participation throughout the lesson.

While reading strategy helps students avoid the traditional grammar-translation approach, it also emphasizes active involvement with the whole text. In this stage, teachers support their students in mastering reading comprehension and in organizing information from the provided material. Students use their background knowledge and own experience, moving from passage to passage. They make comparisons and draw conclusions connecting the new task to the input they already know about the subject of the material. Throughout active engagement in the while-reading process, the teacher encourages students to apply several tasks, such as annotating the text by margin notes, grasping the main idea, and supporting ideas in the reading passage. All these instructional approaches in this stage develop not only students' reading comprehension but also enable teachers to focus on the whole process.

Post-reading strategy is a part of reading comprehension in which students apply their critical thinking skills to conclude the topic they have read. Teachers help students conclude, summarising what they have read and evaluating the ideas in the reading material. Using guided reading to improve students' understanding of the material enhances their reading competency and creates opportunities to engage with more academic reading materials for their continued educational success.

The scanning and skimming strategy is applied in reading comprehension of academic and professional content to master the material and visualize the steps more clearly. In this reading strategy, teachers provide students

with opportunities to promote their interest and engagement through in-depth analysis and discussion while developing their critical thinking. Marina Igoryevna Doljenkova & et.al state that scanning allows learners to locate elements of the text containing the sought-after information during the text stage, and skimming enables the learner to evaluate the relevance of the text's content based on key words and determine the structure of the text. Vita V. Vonog et al. claim that students would attempt to find the answer quickly, using the skimming reading strategy. Scientists hold the view that the students would attempt to find the answer quickly in a very short period of time. Such 'speed-reading' or accelerated reading is mainly concerned with finding key points, the basic structure of the text (Vonog et al., 2022).

Conclusion. To come to the point of the research literature review and methods and discussion demonstrate that implementing explicit reading strategies within a Content-Based Instruction (CBI) plays a significant role in improving learners' academic and professional reading comprehension. Implementing cognitive strategies, such as inference-making, activating background knowledge, and integration of textual information, contributes to deeper text engagement and meaningful construction. As a whole, metacognitive strategies-particularly monitoring, regulation, and reflective evaluation-support learners in managing their own learning processes, becoming strategic and autonomous readers.

Reading strategies based on pre-reading, while-reading, and post-reading instruction increases task awareness, fosters active participation, and enhances comprehension outcomes by guiding learners purposefully through the reading process. Furthermore, CBI supports effective strategy instruction by incorporating reading tasks in meaningful disciplinary contexts relevant to learners' academic needs and future professional environments. This approach enables learners to transfer reading skills beyond the classroom, contributing to long-term cognitive, linguistic, and performance-based outcomes. The involvement of scanning and skimming strategies, collaborative engagement, and problem-solving tasks was also shown to develop critical thinking, accelerate information processing, and build confidence among L2 learners.

#### Conclusion

In conclusion, aligning reading strategy instruction with Content-Based Instruction not only advances comprehension proficiency but also strengthens learners' academic literacy and readiness for active communication. Future research should be focused on longitudinal, skill-integrated models of strategy training and the impact of technology-enhanced CBI environments to better understand how strategy development evolves across diverse learner profiles and educational settings. Such investigations will further inform evidence-based practices that promote sustainable and equitable academic success in English learning contexts.

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