Metacognition in Reading: A Synthesis of Seminal Insights and Strategies

Mohamed Hafizuddin Mohamed Jamrus

Akademi Pengajian Bahasa, Universiti Teknologi MARA

hafizuddinmj@uitm.edu.my

Abstract

This research paper explores the dynamic interplay between metacognition and reading comprehension, aiming to provide a comprehensive understanding of metacognitive strategies' role in enhancing comprehension skills. The study systematically analyses seminal works in the field, categorizes key metacognitive strategies, and evaluates their practical implications in reading comprehension instruction. Metacognition, the awareness and regulation of one's cognitive processes, holds a pivotal position in the realm of education. As learning paradigms evolve, understanding how metacognitive strategies influence the comprehension of written text becomes increasingly essential. This research addresses this pressing need through qualitative content analysis, uncovering themes and patterns in textual data. The analysis of five seminal research papers highlights metacognition's pivotal role in guiding readers toward deeper understanding. Findings underscore the instrumental nature of metacognitive strategies, such as planning, monitoring, and evaluation, in enhancing reading comprehension. Furthermore, the study introduces the innovative use of story-books as catalysts for metacognitive engagement among learners. The synthesis of identified insights and strategies contributes to a profound understanding of the metacognition-reading comprehension nexus, extending implications beyond language learning to broader educational contexts. This research paper offers valuable insights for educators, researchers, and policymakers. It provides a foundation for integrating metacognitive strategies into reading comprehension instruction, empowering learners to navigate complex texts effectively. Ultimately, this study advances knowledge in metacognition, literacy, and education, highlighting metacognitive strategies as potent tools for elevating reading comprehension skills.

Keywords: *metacognition, reading strategies, metacognitive reading strategies*

Introduction

Context and Background

The integration of metacognition in the realm of reading comprehension represents a promising avenue for enhancing the cognitive processes underlying effective reading. Within the contemporary landscape of information abundance, the capacity to comprehend complex textual materials holds paramount importance. Metacognition, characterized by the conscious awareness and strategic control of one's cognitive processes, emerges as a pivotal factor in achieving heightened reading comprehension (Flavell, 1979). This study acknowledges the burgeoning body of literature on metacognitive strategies in reading comprehension (Baker & Brown, 1984). It is incumbent upon us, however, to consolidate and synthesize the diverse array of seminal insights and strategies that have emerged within this field. Thus, the present paper embarks on the ambitious endeavor of amalgamating and evaluating these perspectives.

The ensuing exploration unfolds in a structured manner. Commencing with a meticulous review of the fundamental tenets of metacognition and its pertinence to the act of reading, we lay the foundation for

our subsequent analysis (Pressley & Afflerbach, 1995). Thereafter, our scholarly journey proceeds to traverse the seminal research and strategies that have emanated from the intersection of metacognition and reading comprehension. By employing rigorous synthesis techniques, we aim to furnish readers with a comprehensive understanding of the intricate relationship between metacognition and reading comprehension (Veenman, 2005). Moreover, our deliberations culminate in the delineation of implications and recommendations for further scholarly inquiry.

Central to our research endeavor is the aspiration to conduct a critical analysis of seminal insights and strategies in metacognition as they pertain to reading comprehension. In so doing, we endeavor to provide a scholarly discourse that not only illuminates the intersections of these domains but also underscores the transformative potential of metacognitive awareness in the realm of reading proficiency (Schraw, 1998). The titles of all seminal papers will be disclosed below to ensure clarity and coherence of this paper.

Title Of Seminal Papers	Authors
Metacognitive strategies as points in teaching reading comprehension	Kazbekova, M. & Zhussupova, R. (2016)
Empowering ESL readers with Metacognitive Reading Strategies	Maarof, N. & Maasum, T.N.R.T.M. (2012).
Differences in the metacognitive awareness of reading strategies among native and non-native readers.	Mokhtari, K. & Sheorey, R. (2001).
Relationships between teachers' metacognitive knowledge and students' metacognitive knowledge and reading achievement	Kikasm, E., Jogi, A.K. & Soodla, P. (2016).
The impact of metacognitive scaffolding and monitoring on reading comprehension.	Zhang, L.J., Renandya, W.A. & Dabarera, C. (2013).

Research Objectives

This research aims to:

1. Systematically analyse and synthesise seminal works in the field of metacognition and reading comprehension.

2. Identify and categorise key metacognitive strategies as documented in the literature related to reading comprehension.

3. Evaluate the practical implications of metacognitive strategies in reading comprehension instruction.

Research Significance

This study investigates the integration of metacognitive strategies in reading comprehension. The significance lies in the fact that reading comprehension is a foundational skill for learning and knowledge acquisition. By synthesizing insights and strategies, the research aims to provide a deeper understanding of how metacognition can enhance reading comprehension.

The research paper provides a detailed methodology and valuable insights that can benefit educators. Teachers can potentially apply the findings and strategies outlined in the paper to improve their teaching methods, ultimately helping students develop stronger reading comprehension skills. This has a positive impact on the quality of education.

Metacognition, often referred to as "thinking about thinking," is a pivotal concept in cognitive psychology and education. This research contributes to the growing body of literature on metacognition by consolidating and analyzing key insights and strategies. It offers a comprehensive overview of the state of metacognitive research, specifically in the context of reading comprehension. Numerous prior research endeavors have underscored the significance of reading tactics and metacognitive processes in the context of reading. Lin and Yu (2015) conducted a think-aloud investigation concerning the reading approaches employed by college students studying English as a foreign language (EFL) when engaging with texts in both their native language, Chinese (L1), and their second language, English (L2). Their study unveiled that, when confronted with English texts, students exhibited a heightened and more efficient utilization of diverse reading strategies, thereby enhancing their capacity to comprehend the text effectively.

The paper acknowledges that while there is existing research on metacognition and reading comprehension, there is also a mosaic of perspectives and findings. By conducting a synthesis, it aims to identify common threads, gaps, and areas where further research is needed. This helps guide future research endeavors and ensures a more comprehensive understanding of the topic.

The research explores the practical implications of metacognitive strategies in teaching reading comprehension. It discusses how these strategies can be applied in educational settings, potentially benefiting students' reading abilities. This practical approach can be of interest to educators, curriculum designers, and policymakers.

The research focuses on EFL (English as a Foreign Language) learners, which is significant given the global importance of English proficiency. The findings may be particularly relevant for educators and learners in non-English-speaking countries who are striving to improve their English reading skills. The identification of strengths and weaknesses in the existing literature and research methodology provides valuable insights for future researchers. It highlights areas where further investigation is needed and suggests avenues for refining research designs.

In summary, the research paper on "Metacognition in Reading: A Synthesis of Seminal Insights and Strategies" is significant because it advances our understanding of how metacognition can enhance reading comprehension, offers practical implications for educators, contributes to metacognitive scholarship, and guides future research in this domain. It has the potential to improve the quality of education and benefit learners, particularly in the context of language learning.

Scope and Limitations

Scope and limitations are essential components of any research paper as they help define the boundaries and context of the study.

Scope

This research focuses on synthesizing and analyzing key insights and strategies related to metacognition in reading comprehension from a variety of academic sources. The study employs a content analysis methodology to systematically review and categorise relevant literature, providing a comprehensive overview of the field. The paper primarily addresses the relevance of metacognition in reading comprehension within educational settings, with a particular emphasis on EFL (English as a Foreign Language) learner. Practical applications of metacognitive strategies for enhancing reading comprehension teaching are discussed, offering valuable insights for educators. The research identifies common themes, research gaps, and future directions in the metacognition and reading comprehension field, contributing to ongoing scholarly discussions.

Limitations

Due to the extensive nature of the topic, the research focuses on a selected subset of seminal works, potentially omitting some valuable insights. Findings and strategies presented may not universally apply to all educational contexts or learner groups, as they are based on specific literature and contexts. The research primarily centers on English-language literature and EFL learners, potentially not accounting for language-specific or cultural variations. The reliance on published works may introduce publication bias, omitting unpublished or less accessible materials from the analysis. The field of metacognition and reading comprehension continuously evolves, and this research represents the state of the field at a specific point in time. The effectiveness of metacognitive strategies in teaching may vary based on educators' expertise and classroom dynamics. This study primarily employs qualitative content analysis and does not include quantitative data or experimental results.

Problem Statement

Reading comprehension is a fundamental skill essential for academic achievement and lifelong learning. However, numerous students, including both English as a Foreign Language (EFL) learners and native speakers, encounter challenges in comprehending and engaging with complex texts. While metacognition, encompassing the awareness and regulation of one's cognitive processes, has emerged as a promising approach to enhance reading comprehension, a comprehensive synthesis of the practical implications of metacognitive strategies in the context of diverse learners remains an area of inquiry.

Despite a growing body of literature on metacognition and reading comprehension, there exists a need to systematically analyse and synthesise seminal works to uncover key metacognitive strategies that facilitate comprehension. Furthermore, assessing the practical implications of these strategies in real-world educational settings, including their impact on learners' performance and the role of educators in fostering metacognitive awareness, is imperative.

To address these critical gaps, this research paper undertakes a rigorous examination of five influential research studies, offering an in-depth analysis of metacognitive strategies and their effectiveness in promoting reading comprehension. By exploring the potential benefits of metacognitive strategies among diverse groups of learners and acknowledging the pivotal role of educators in cultivating metacognitive awareness, this study seeks to provide valuable insights and practical implications for educators, researchers, and policymakers dedicated to enhancing reading comprehension instruction.

Methodology

Research Design and Approach

This research employs a qualitative content analysis approach to investigate and synthesise seminal insights and strategies within the domain of metacognition in reading comprehension. Qualitative content analysis is chosen as the methodological framework due to its suitability for uncovering themes and patterns in textual data, aligning with the exploratory nature of this study.

Data Sources

The primary data sources for this analysis consist of five research papers and articles selected for their relevance to metacognition in reading comprehension. These sources were chosen from academic databases and repositories, ensuring they contribute valuable insights to the research question.

Data Collection

For this research, a qualitative content analysis approach was employed to synthesise insights and strategies related to metacognition in reading comprehension. The data sources consisted of five seminal research pa-

pers in the field, which were selected based on their relevance and significance. The year of publication was chosen between 2000-2020 to ensure the validity and reliability of the data for the analysis of this research paper.

Unit of Analysis

The unit of analysis in this study is individual text segments, which include sentences, paragraphs, and excerpts within the selected research papers and articles. Text segments were chosen as the analytical units for their ability to convey nuanced ideas and themes within the literature.

Data Analysis Process

The analysis process was guided by qualitative content analysis principles, with a focus on inductive reasoning. In this approach, data were not coded using predefined categories but rather allowed to emerge organically from the text. The selected research papers were subjected to a thorough review to identify key insights, strategies, and findings related to metacognition and reading comprehension. Instead of coding, a systematic content analysis was conducted by carefully reading and categorizing relevant information. The data were categorised based on recurring themes, concepts, and patterns identified within the selected research papers. The goal was to identify commonalities, differences, and significant insights related to metacognition in reading comprehension. Following data categorization, a synthesis of the identified insights and strategies was performed. This involved summarizing and organizing the data to create a coherent narrative that presents a comprehensive view of metacognition's role in reading comprehension.

Ethical Considerations

This analysis involved no human subjects or sensitive information. The selected research papers were publicly available and did not require ethical clearance. Ethical principles of academic research, including proper citation and referencing, were strictly adhered to during the data collection and synthesis process. All sources were appropriately credited, ensuring academic integrity.

Validity and Reliability

The validity of this qualitative content analysis is ensured through its alignment with the research objectives and the transparency of the analysis process. Reliability is supported by the provision of a detailed account of the analysis steps, allowing for potential replication by other researchers.

Limitations

It's important to acknowledge potential limitations in this methodology. While qualitative content analysis is a valuable approach, it relies on subjective judgment for data interpretation. Therefore, the findings are contingent upon the researchers' interpretation of the data from the selected research papers.

Conclusion

This methodology underscores the suitability of qualitative content analysis for the investigation of metacognitive strategies in reading comprehension. By employing an inductive approach, this study aims to provide a comprehensive synthesis of seminal insights and strategies within the field, contributing to a deeper understanding of the intersection between metacognition and reading comprehension.

Findings

Introduction to chapter

In this section, we embark on a comprehensive exploration of the existing literature pertinent to the integration of metacognitive strategies in teaching reading comprehension, with a specific focus on English as a Foreign Language (EFL) learners. This serves as the foundational step in our quest to understand the role of metacognitive strategies in enhancing reading skills, particularly within foreign language education.

Seminal paper 1: Metacognitive strategies as points in teaching reading comprehension
Metacognitive Strategies and Reading Comprehension
Metacognition was originally coined by Flavell (1979) and has become one of the most prominent idea/constructs in educational psychology. He defined metacognition as cognition about cognition or thinking about one's own thinking, including both the processes and the product. Metacognition, described as the awareness, knowledge, and control of one's learning process, constitutes the cornerstone of research by Kazbekova and Zhussupova (2016). The researchers commenced by emphasizing the pivotal role of reading as an essential avenue for knowledge acquisition. Furthermore, the researchers delved into metacognitive awareness and metacognitive knowledge, critical components that underscore the imperative need for metacognitive strategies in language learning. Within this discussion, they expound upon three central metacognitive techniques: planning, monitoring, and evaluation, which are commonly employed in teaching reading comprehension. In a study conducted by Fu and his team in 2014, they investigated the efficiency of utilizing online storybooks. Their findings revealed that the prevalent reading strategies employed during discussions and readings of online storybooks include predicting, inferencing, and identifying. Conversely, the strategy of monitoring comprehension was found to be the least frequently utilised. These strategies not only

play a pivotal role in enhancing reading comprehension but are intricately linked to the development of reading proficiency.

Metacognition and Reading Comprehension: Theoretical Framework

This section delves into the theoretical underpinnings of metacognition and its relevance in the context of reading comprehension. The researchers traced the historical evolution of metacognitive theory, which gained prominence in the 1970s. This exploration establishes metacognition as a higher-order intellectual activity that empowers students to effectively assess and regulate their reading processes.

The Role of Storybooks in Facilitating Metacognitive Strategies

The following subsection sheds light on the rationale behind selecting storybooks as instrumental tools to activate students' metacognitive strategies during reading. The researchers emphasised the viability of utilizing storybooks as catalysts for enriching metacognitive engagement, particularly among EFL learners, and its positive impact on improved reading comprehension.

Pilot Teaching of Reading Comprehension

This critical section delineates the core objectives of the study, encompassing geographical context, student demographics, research methodologies, and key findings. The research unfolds at the Eurasian National University, with a focus on second-year students engaged in EFL learning. Employing a quantitative research design, the study incorporates pre-investigation and post-investigation tests, as well as implementation tasks, to assess the efficacy of metacognitive strategies in teaching reading comprehension. Participants are categorised into control and experimental groups, with the latter exposed to the "GUIDE on using metacognitive strategies in teaching reading comprehension." The results not only highlight the acquisition of metacognitive strategies but also underscore improved attitudes and enhanced performance in reading comprehension among participants, affirming the efficacy of metacognitive strategies in foreign language learning.

Strengths and Areas for Improvement

While the paper exhibits commendable strengths, including its comprehensive research methodology and the adoption of an experimental design, several areas for improvement warrant consideration. These encompass the need for a more extensive literature review, empirical validation of specific statements, concerns related to sample size, and the absence of crucial materials within the paper. Addressing these aspects will enhance the applicability and rigor of future research endeavors.

In summary, this literature review provides a robust foundation for comprehending the integration of metacognitive strategies in teaching reading comprehension. It underscores the pivotal role of metacognitive strategies in enhancing reading skills among EFL learners and their potential implications for foreign language instruction. The subsequent sections of this research paper will further build upon this literature review to investigate the impact of metacognitive strategies on reading comprehension among ESL learners in Malaysia, within the broader context of metacognition and language education.

Seminal paper 2: Empowering ESL Readers with Metacognitive Reading Strategies

Metacognition and Language Learning

Metacognition, elucidated as the knowledge, awareness, and control of one's learning processes, constitutes the core theme of Maarof and Tengku Mohamad Masum's research. The researchers initiated by emphasizing the paramount importance of reading as a foundational vehicle for knowledge acquisition. Additionally, the researchers dissected the term 'metacognition,' emphasizing its multifaceted nature in relation to learning processes. Within this discussion, the researchers delved into the realms of effective reading, metacognition awareness, and metacognitive knowledge, collectively highlighting the imperative need for integrating metacognitive strategies into language learning.

Metacognitive Strategies in Teaching Reading Comprehension

The subsequent subsection scrutinises metacognitive reading strategies, tracing the historical evolution of the term 'metacognition' and its transformation into a full-fledged theoretical framework during the 1970s. According to Omar and Safi (2015), the reading aloud strategy is regarded as highly effective due to its engagement of students in activities such as questioning, providing comments, and making predictions under the guidance of the teacher. This strategy is considered particularly beneficial. Drawing upon a substantial body of literature, the paper underscores the pivotal role of metacognitive strategies in elucidating and regulating the reading process. It repeatedly accentuates metacognition as a higher-order intellectual activity that encompasses students' capacity to critically evaluate and govern their reading processes.

Impacts of Metacognitive Reading Strategies on Language Learners

Extensive research findings from prior studies pertaining to metacognitive reading strategies and their effects on language learners are presented. It is discerned that proficient readers tend to employ a heightened degree of metacognitive strategies in their reading endeavors, displaying acute awareness of their reading processes and adeptly regulating their cognitive faculties to align with the context. Significantly, this phenomenon extends beyond native language users to include second language learners, especially when navigating the rigorous demands of academic texts within a university setting. However, a notable distinction

emerges between native language users and ESL learners, with the former exhibiting a comparatively higher utilization of both cognitive and metacognitive reading strategies than the latter. To substantiate the claim that metacognitive reading strategies can empower ESL learners, the authors reference an experimental study. This study aimed to ascertain the impact of strategic reading instruction on the final scores of ESL learners completing their English courses, and the results were affirmative. Students in the experimental group, who underwent strategic reading instruction, achieved higher scores compared to those in the control group.

Gender, Reading Preferences, and Strategies

A pivotal point in the paper explores the differentiation and correlation between gender, reading preferences, and reading strategies. The analysis, conducted on 5th and 6th-grade students, indicates that female students demonstrate superior flexibility in strategy utilization and exhibit higher levels of metacognitive awareness compared to their male counterparts.

Methodology and Findings

This section provides insights into the research methodology employed by the authors. They adopted a quantitative research method utilizing questionnaires as data collection instruments. The primary tool used was the "Metacognitive Awareness of Reading Strategies Inventory" questionnaire, distributed to 41 university students at a public institution in Malaysia. The questionnaire encompassed three distinct metacognitive strategies: global strategies, problem-solving strategies, and support strategies. Students were tasked with selecting the strategies they most frequently employed when engaging with academic texts. This questionnaire comprised 13 items for global strategies, 8 items for problem-solving strategies, and 9 items for support strategies. The acquired data underwent quantitative analysis employing descriptive statistics. The findings unveiled those problem-solving strategies garnered the highest mean score, followed by global strategies and support strategies, with the latter obtaining the lowest mean average. These numerical values signify that students actively engage with metacognitive reading strategies to plan, organise, and evaluate their learning processes.

The Significance for ESL Readers in Malaysia

The contextual relevance of ESL readers within the Malaysian educational landscape is underscored in this section. ESL readers stand to gain significantly from the incorporation of metacognitive reading strategies, considering their pursuit of English language proficiency. The ability to engage in metacognition, or thinking about one's thinking, and to make adaptive decisions based on situational demands, can prove highly advantageous for ESL learners. The study accentuates the challenges ESL learners encounter when reading ac-

ademic texts and highlights how fostering awareness of what they are reading, and the intended purpose of their reading can enhance their reading comprehension. Strategies such as using a dictionary, as suggested in the support strategy, can empower ESL learners and mitigate the impact of affective factors like anxiety on the reading process.

Strengths and Limitations

A critical aspect of this literature review pertains to the strengths and limitations of the research paper. The authors commendably reviewed a plethora of related research, incorporating various variables and methodologies, including gender differences and experimental studies. This multi-dimensional approach underscores the versatility of metacognitive reading strategies, which educators, researchers, and teachers can study and apply in their instructional practices. However, it is important to note that the study's sample size is relatively small, which limits the generalizability of the results to a broader population. Future research endeavors may benefit from employing a larger and more diverse sample.

Seminal paper 3: Differences in the metacognitive awareness of reading strategies among native and non-native readers

The Reading Process and Metacognition

To contextualise the discussion, the researchers addressed the intricate nature of the reading process. Reading is a dynamic, non-linear endeavor wherein readers continuously formulate hypotheses, test predictions, and draw upon their background knowledge and language schemata to construct meaning. It can be envisaged as an active comprehension process, facilitated by readers' adept use of suitable strategies. Contemporary models of reading emphasise the interactive cognitive nature of this process, highlighting the role of prior knowledge and cultural context. Previous research in education and language learning has predominantly focused on proficient readers, unraveling the strategies they employ, and the conditions under which these strategies are invoked. This scrutiny is crucial for guiding non-proficient language learners in enhancing their reading comprehension. Metacognitive awareness assumes a pivotal role in reading comprehension, irrespective of whether it occurs in one's native language or in a second language. Without metacognitive awareness, readers tend to skim the surface, failing to delve into the depths of comprehension. Proficient readers, as noted by Mokhtari and Sheorey (2001), are strategic and "constructively responsive," consciously orchestrating cognitive resources to ensure optimal comprehension.

Factors Influencing Metacognitive Awareness

The subsequent exploration within this section centers on the factors influencing metacognitive awareness among both native and non-native speakers. The authors' inquiry reveals that metacognitive awareness is

shaped by diverse elements, including previous experiences, individual beliefs, and culturally specific instructional practices.

Differences between Proficient and Non-Proficient Readers

A critical aspect of the literature review delves into the disparities between proficient and non-proficient readers of the English language. Proficient readers, it is observed, actively engage in deliberate, planful thinking and employ flexible strategies, periodically monitoring their comprehension. In contrast, novice readers often appear unaware of these strategies and the necessity of their application. Proficient readers, in essence, exhibit metacognitive awareness and strategies, while their novice counterparts lack such awareness and competence.

Research Gap and Hypotheses

The researchers identified a critical research gap pertaining to whether proficient second language users possess a level of metacognitive awareness and strategy employment equivalent to native speakers. This literature review elucidates how this research endeavor addresses this gap. The authors hypothesise that disparities exist between native and non-native speakers due to variations in social, cultural, and educational backgrounds.

Methodology and Findings

Within this section, we transition to an exploration of the research methodology employed by Mokhtari and Sheorey. Their study encompassed 152 non-native speakers and 150 native speakers of the English language at two Midwestern universities in the United States. Data collection was executed through the utilization of the "Survey of Reading Strategies" (SORS) questionnaire, adapted from the Metacognitive-Awareness-Of-Reading-Strategies (MARSI). This instrument gauged the perceived utilization of reading strategies by post-secondary students when engaging with academic materials in English. The findings align with the researchers' expectations, demonstrating a direct correlation between high awareness of strategic reading and language proficiency. Notably, ESL readers exhibit a statistically significant higher usage of support strategies in comparison to their native counterparts.

Furthermore, regardless of reading ability or gender, both native and ESL learners attribute a similar order of importance to cognitive, metacognitive, and support strategies when engaging with academic texts. It is observed that highly proficient students, both native and ESL, display a greater inclination toward employing cognitive and metacognitive strategies compared to their less proficient peers. Interestingly, among native readers, high-level reading ability corresponds with an increased emphasis on support reading strategies, whereas ESL learners consistently value support strategies, irrespective of proficiency levels.

However, an interesting gender-related distinction emerges. Among native readers, females exhibit a higher awareness of reading strategies in terms of frequency of usage, reflecting a differentiation between higher and lower reading ability students. This contrast is not as pronounced among ESL learners, where an imbalance in the sample sizes between males and females impacts the comparability of results.

This review recognises the influential nature of this research paper within the broader academic landscape. A key strength of this paper lies in its multifaceted exploration of gender, reading ability, and native vs. non-native speaker differences. The methodology and data analysis are presented in a clear and accessible manner, facilitating comprehension for researchers, educators, and teachers. The substantial sample size ensures the potential generalizability of the results, a vital aspect in research of this nature. Furthermore, the paper highlights an intriguing research gap within the field of metacognitive reading strategies.

Seminal paper 4: Relationships between teachers' metacognitive knowledge and students' metacognitive knowledge and reading achievement

Metacognition in Reading: A Triad of Factors

The literature review commences by elucidating the fundamental components of metacognition in the context of reading. This triad comprises three interrelated factors: reflection on the ongoing reading process, the strategic activities triggered by this reflection, and the metacognitive knowledge base from which these activities are drawn. Studies reviewed in this paper consistently affirm that students' metacognitive knowledge of reading strategies positively correlates with their reading comprehension skills. This substantiates the pivotal role of metacognition in the realm of reading comprehension.

The Significance of Reading Comprehension and Metacognition

The following exploration within this section focuses on the intricate relationship between reading comprehension and metacognition. Proficient readers, as revealed through previous research, engage in a multitude of strategies during the reading process, ranging from previewing and predicting to questioning, imagining, seeking clarification, interpreting, evaluating, and summarizing. They possess the capacity to judiciously apply these strategies depending on the reading purpose and the text's characteristics. The authors argued that reading comprehension is not solely influenced by intellectual and linguistic abilities or motivational factors but is also closely associated with metacognitive knowledge of reading strategies. When students are equipped with awareness and understanding of metacognitive strategies and when and how to employ them, their ability to comprehend written text and strategic reading comprehension improves significantly. The relationship between metacognitive knowledge of reading strategies and reading comprehension is thus mutually reinforcing.

Teacher's Role in Metacognitive Knowledge Development

The literature review takes a critical turn by examining the role of teachers in the development of students' metacognitive knowledge and reading comprehension. The authors observe a lack of research dedicated to teachers' metacognitive knowledge of reading strategies and its impact on their instructional practices. Previous research reveals significant variations in teachers' metacognitive knowledge levels, with many falling short of achieving a high degree of metacognitive awareness regarding reading. This discrepancy can be attributed to the limited exposure teachers receive during their teacher education programmes to comprehensive knowledge of reading processes and reading instruction. Most teachers rely primarily on their personal reading experiences as their primary source of metacognitive awareness and strategies. This insight underscores the importance of further exploration into teachers' metacognitive knowledge.

Hypotheses and Research Questions

This paper establishes hypotheses and research questions to guide its inquiry. The primary hypothesis posits a significant positive correlation between students' metacognitive knowledge and reading comprehension. The first research question delves into the relationship between teachers' metacognitive knowledge of reading strategies and their students' corresponding metacognitive knowledge. The second research question explores the connection between teachers' metacognitive knowledge of reading strategies and their students' reading comprehension.

Methodology and Findings

Within this section, the researchers transitioned to an exploration of the research methodology deployed by Kikasm, Jogi, and Soodla. Their study incorporated 829 eighth-grade students and 34 teachers as participants. The researchers reported a significant relationship between teachers' metacognitive knowledge of reading strategies and their students' metacognitive knowledge. However, this correlation was not mirrored in relation to reading comprehension.

This literature review acknowledges the significant contributions of this research paper. Its unique perspective on teachers' metacognitive knowledge adds a fresh dimension to the field of metacognitive reading strategies, which has predominantly focused on students. The paper also highlights the practical relevance of this research to real classroom situations, shedding light on the challenges teachers face in translating their metacognitive awareness into classroom practice. It underscores that, in many cases, teachers' instruction isn't primarily motivated by the desire to improve students' reading comprehension but serves other purposes.

However, this study is not without limitations. It operates on a longitudinal nature, limiting the interpretation of causation. The focus on measuring teachers' metacognitive knowledge rather than their actual

teaching practices could be seen as a limitation. Additionally, the reliance on a single text for reading assessment suggests that multiple texts could provide a more comprehensive understanding of results.

In conclusion, this literature review has delved into the essential aspects of the paper, emphasizing the relationships between teachers' metacognitive knowledge and students' metacognitive knowledge, and reading achievement. It sheds light on the intricate dynamics of metacognition in reading and its profound influence on reading comprehension. The subsequent sections of this research paper will further explore the empirical findings and implications arising from these complex relationships, ultimately contributing to a deeper understanding of the role teachers play in fostering metacognitive knowledge among their students.

Seminal paper 5: The impact of metacognitive scaffolding and monitoring on reading comprehension
Key Metacognitive Concepts

The introduction initiates by establishing crucial metacognitive concepts such as metacognition, metacognitive awareness, and metacognitive scaffolding. In this context, metacognition is defined as the reader's declarative knowledge brought into play when awareness is heightened regarding the reader's comprehension and the text's demands. The authors assert that metacognitive strategies and awareness can be elevated to enhance reading comprehension skills. Repeatedly, the research underscores the potential of metacognitive interventions in ameliorating overall literacy. The primary focus here is on metacognitive scaffolding, a pedagogical approach wherein metacognitive strategies are explicitly taught in the classroom. Given the challenges ESL learners encounter in acquiring language skills, especially reading comprehension, the paper emphasises the importance of making ESL students aware of metacognitive reading strategies. The approach outlined involves providing students with assistance tailored to their zone of proximal development. The paper further elucidates that metacognitive scaffolding can be achieved through both single-strategy and multiple-strategy programmes, each having demonstrated its capacity to equip students with a diverse array of strategies they can aptly employ to meet the demands of reading comprehension. An exemplar of a multi-strategy programme is reciprocal teaching, which involves structured dialogues between teachers and students encompassing questioning, summarizing, clarifying, and predicting. In essence, teachers guide students explicitly to activate their metacognitive strategies, and this approach has consistently demonstrated its effectiveness in enhancing reading comprehension.

Research Questions and Hypotheses

The paper sets forth its research questions, framing the subsequent inquiry. The primary research questions posed are "What is the relationship between metacognitive awareness raising and reading comprehension improvement?" and "What is the impact of metacognitive awareness raising on students' reading comprehension?" These questions lay the groundwork for the study's investigative pursuits.

Methodology and Data Collection

Transitioning to the methodology section, the paper offers insights into the research's participants, procedures, instruments, and data analysis. Phase 1 of the study engages two intact classes of Secondary 1 students from the Express stream of a government secondary school in Singapore. Phase 2 focuses on three students from the experimental group, strategically selected to represent the highest, average, and lowest comprehension levels in reading test scores. Procedures commence with the administration of the Metacognitive Awareness of Reading Strategies (MARSI) questionnaire to both control and experimental groups. The intervention spans five weeks, with students receiving two 60-minute classes weekly. In the experimental group, students are exposed to metacognitive strategy instruction via the reciprocal teaching method, while the control group follows a more traditional, teacher-centered approach to reading comprehension without explicit metacognitive strategy instruction. Data collection unfolds in two phases, with the first phase incorporating two self-report instruments: MARSI and the University of New South Wales, International Competitions and Assessments for Schools (UNSW ICAS) English comprehension Paper F (2008). Phase 2 supplements the quantitative data gathered in phase 1 with semi-structured interviews. Data analysis entails descriptive statistics for MARSI, correlational analysis to ascertain the relationship between metacognitive awareness raising efforts and reading comprehension improvements, and content analysis for the second phase.

Results and Discussion

The third part of this paper elucidates the findings and subsequent discussions. The first finding addresses the initial research question, confirming a positive correlation between metacognitive awareness raising and improved reading comprehension. The second finding indicates that students in the experimental group achieved significantly higher outcomes than their counterparts in the control group. Furthermore, after the implementation of metacognitive strategy instruction, students perceived themselves as utilizing reading strategies more frequently. However, findings from the second phase of the study, involving interviews with students, revealed that despite being informed about metacognitive strategies, students could provide only a limited number of examples. This outcome underscores the limited availability of these strategies for practical use. In sum, the paper suggests that metacognitive strategy instruction effectively increases the frequency of reported metacognitive strategy use among students.

This research paper contributes a unique perspective to the field by examining the explicit teaching of metacognitive strategies by teachers—a perspective less prevalent in mainstream literature. Existing scholarship predominantly focuses on students' acquisition of metacognitive strategies as their language proficiency grows. The paper underscores the importance of explicit instruction, demonstrating that promising results await at the culmination of such pedagogical intervention. The empirical nature of experimental stud-

ies enhances the reliability of their results, making this paper particularly valuable for researchers, educators, and students interested in the intersections of reading, literacy, and metacognition.

While this study offers valuable insights, it is not without limitations. The longitudinal nature of the study allows for interpreting relationships but not causation. Additionally, the study predominantly measures teachers' metacognitive knowledge, leaving aside an evaluation of their actual teaching practices related to metacognitive strategies. Furthermore, the reliance on a single text for reading assessment suggests that multiple texts could provide a more comprehensive understanding of results. The study's small sample size for phase 2 raises concerns about result generalizability and suggests that future research should explore these issues on a larger scale.

In conclusion, this literature review has comprehensively explored the seminal paper's key points, emphasizing the impact of metacognitive strategy scaffolding on reading comprehension among ESL learners. The following sections of this research paper will delve deeper into the empirical findings and their implications, ultimately enhancing our understanding of the role of explicit metacognitive strategy instruction in the development of reading comprehension skills among ESL learners.

Conclusion

Common Themes and Implications

This section draws together common themes and implications that emerge from the analysis of the five seminal research papers. These themes and implications provide a synthesised understanding of the central role of metacognitive reading strategies in enhancing reading comprehension and the various pedagogical approaches employed to facilitate their development. Additionally, the role of teachers, gender differences, and the adaptability of metacognitive strategies across diverse language backgrounds are highlighted.

Metacognition's Integral Role in Reading Comprehension

One of the overarching themes that emerge from the analysis of the selected research papers is the fundamental role of metacognition in reading comprehension. Each study underscores the significant impact of metacognitive strategies on enhancing readers' comprehension of written text. Whether it is in the context of English as a Foreign Language (EFL) learners, ESL learners, native or non-native readers, metacognitive strategies consistently emerge as vital tools for promoting a deeper understanding of reading materials. As indicated by Semtin and Maniam (2015), Cognitive Strategies encompass a range of approaches, including the Reciprocal Teaching Intervention Strategy (comprising questioning, summarizing, clarifying, and predicting), Planning Strategies (involving pauses for reflection, maintaining focus, text scanning, deliberate and attentive reading, and decision-making regarding what to read), and Monitoring Strategies (entailing text revisitation, attentive reading, and self-directed questioning). These strategies serve to govern the learn-

ing process by establishing a reading objective, making predictions, self-assessing comprehension, and guiding attention.

The Diverse Pedagogical Approaches

The discussion reveals that the integration of metacognitive strategies into reading instruction takes on various forms and approaches. For instance, Kazbekova and Zhussupova (2016) propose the use of storybooks as catalysts to activate students' metacognitive strategies. Maarof and Maasum (2012) focus on empowering ESL readers through explicit metacognitive strategy instruction. Zhang, Renandya, and Dabarera (2013) investigate the impact of metacognitive strategy scaffolding and instruction on ESL learners. This diversity in pedagogical approaches highlights the adaptability of metacognitive strategies in different educational settings and their potential to cater to a wide range of learners.

The Role of Teachers in Metacognition

One noteworthy aspect that surfaces in the discussion is the pivotal role of teachers in shaping students' metacognitive awareness. Kikasm, Jogi, and Soodla (2016) delve into the relationship between teachers' metacognitive knowledge and students' metacognitive knowledge and find a significant correlation. This finding emphasizes the importance of equipping educators with metacognitive knowledge to effectively impart these strategies to their students. According to Ali (2019), it is recommended for language instructors to consider instructing various reading strategies tailored to students' specific requirements, aligning with their English proficiency levels and the text genres involved. This becomes especially crucial when students encounter challenges in comprehending texts, particularly when they employ ineffective strategies. However, the study also raises questions about the translation of teachers' metacognitive awareness into tangible improvements in students' reading achievement, suggesting a more intricate dynamic between teacher metacognition and reading comprehension that warrants further investigation.

Gender and Metacognition

The analysis of Maarof and Maasum's (2012) study uncovers gender-based differences in metacognitive awareness and strategy usage among 5th and 6th-grade students. Female students tend to exhibit greater flexibility in the use of reading strategies and demonstrate a higher level of metacognitive awareness compared to their male counterparts. This gender-based distinction not only adds nuance to the discussion but also suggests the need for tailored instructional approaches that consider gender differences in metacognitive development.

Implications for Research and Practice

The findings discussed in this chapter have several implications for both research and practice in the field of metacognition and reading comprehension. First, they emphasize the need for educators to recognize the central role of metacognitive strategies in reading instruction and to receive training in effectively integrating these strategies into their teaching practices. Second, the diversity of pedagogical approaches showcased in the selected papers highlights the flexibility of metacognitive strategies, making them adaptable to various educational contexts and learner profiles. Furthermore, the gender-based differences identified in Maarof and Maasum's (2012) study point to the importance of considering individual differences, such as gender, in metacognitive research and instructional design. This underscores the value of tailored interventions that cater to the specific needs of different learner groups.

Concluding remarks

Flavell's seminal study in 1979 emphasized the pivotal role of metacognition in educational psychology, highlighting its potential to reshape how students learn and acquire language. Over nearly five decades of research, it has become evident that his insights were prescient. The evolution of teaching methodologies, particularly the integration of metacognitive strategies in teaching reading, has yielded substantial benefits for both educators and students alike.

Empowering students with the autonomy to manage their thought processes fosters greater independence in learning, extending the scope of education beyond the classroom. This autonomy is a cornerstone of meaningful learning, as it encourages students to pursue improvement, transcending the mere adherence to a rigid school timetable. Successful implementation of metacognitive strategies also plays a crucial role in cultivating intrinsic motivation among students.

Metacognitive strategies encompass a broad spectrum of techniques and can be correlated with various variables, including gender, age, and English language proficiency. Recognizing the nuanced interplay between these variables is vital for educators, as it ensures the selection of the most effective strategy tailored to the unique dynamics of the classroom environment.

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