# Iranian EFL Learners' Metacognitive Reading Strategies and Reading Comprehension: A Systematic Review

**Mahdi Ghadamgahi**
Department of English, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran
mahdi.ghadamgahi2@gmail.com
**Narjes Ghafournia**
Department of English, Neyshabur Branch, Islamic Azad University, Neyshabur, Iran
narjesghafournia@yahoo.com

## Abstract

This systematic review investigates the impact of metacognitive reading strategies on reading comprehension in English as a Foreign Language (EFL) learners, with a focus on the Iranian context. As metacognitive reading strategies play a vital role in the broader context of language learning and teaching, enhancing reading comprehension in EFL learners is crucial for their academic success and overall language proficiency. A comprehensive literature analysis examined the effectiveness of metacognitive reading strategies, such as planning, monitoring, and evaluating. The review identified challenges faced by Iranian EFL learners, including limited exposure to authentic English materials, traditional teaching methods, and cultural factors. Results indicated that incorporating metacognitive reading strategy instruction into the Iranian EFL curriculum can significantly improve learners' reading comprehension. Effective methods for teaching these strategies include explicit instruction, modeling, and scaffolding, as well as collaborative learning activities. The study has implications for EFL educators, policymakers, and curriculum designers in terms of integrating metacognitive reading strategies into instruction and addressing the influence of cultural factors. Future research could focus on longitudinal studies and explore individual differences in metacognitive reading strategy use among EFL learners.

## Introduction

In today's rapidly evolving learning environments, exacerbated by a sudden shift to remote learning due to global health crises [1, 2], the relevance of metacognition in the field of language acquisition has become increasingly pertinent. The term 'metacognition,' initially proposed by Flavell [3], is used to denote a learner's capacity to recognize and regulate their cognitive processes during their educational journey. In the field of reading comprehension, particularly in English as a Foreign Language (EFL), metacognitive strategies encapsulate the conscious regulation of cognitive processes to decipher and interpret texts [4].

The application of metacognitive strategies, notably planning, monitoring, and evaluating, has been recognized as essential in successful language learning [5, 6]. These strategies play a vital role in enhancing reading comprehension and overall language proficiency in EFL contexts [7]. A wealth of research has validated a strong correlation between the use of metacognitive reading strategies and reading proficiency among EFL learners [8, 9, 10, 11].

However, despite their significance, the systematic implementation of metacognitive reading strategies in EFL classrooms remains sporadic and inconsistent. This inconsistency is especially evident in the Iranian EFL context, where studies exploring these strategies have been relatively limited [12, 13]. A notable gap in the current literature indicates the necessity for a detailed evaluation of these strategies and their influence on reading comprehension, particularly in the context of digital learning environments [1, 2].

This systematic review aims to address this gap by examining the metacognitive reading strategies employed by Iranian EFL learners, assessing their impact on reading comprehension, and evaluating effective instructional methods for their incorporation. While the focus is on traditional classroom settings, the findings are also expected to be relevant in online learning environments. The objectives of this review are to provide an overview of these strategies and their benefits and suggest effective instructional methods for Iranian EFL learners.

The following research questions will guide this review:

1. What are the different types of metacognitive reading strategies used by EFL learners, and how are they categorized?
2. What is the impact of these metacognitive reading strategies on the reading comprehension of EFL learners?
3. What are some effective instructional methods to incorporate metacognitive reading strategies in the context of Iranian EFL learners, considering their specific challenges?

The review employs a systematic methodology to search, select, and analyze relevant studies using comprehensive databases and predetermined criteria. This methodology ensures the rigor and transparency of the review process.

By collating and analyzing existing knowledge, this review aspires to inform future pedagogical practices, contribute to the field of applied linguistics and EFL

instruction, shape educational policies, and ultimately enhance EFL learners' reading comprehension in Iran. Although the primary emphasis is on the effective implementation of metacognitive reading strategies in traditional classroom settings, the insights gained could also be valuable for adapting teaching methods to online environments.

## Literature Review

Embracing Flavell's perspective on metacognition [3], which encapsulates the grasping and steering of our own mental processes, we understand its cardinal role in facilitating successful learning experiences. This concept, carved deeply within the spheres of language absorption and reading comprehension, brings into focus learners engaging with English as a Second (ESL) or Foreign Language (EFL) [14, 15, 5, 8, 16].

A critical constituent of metacognition in language education is the deployment of metacognitive reading strategies. These tactics involve governing cognitive activities during reading, thereby arming learners with the resources to navigate reading obstacles and improve comprehension [4, 7]. Assessment tools, such as the Metacognitive Awareness of Reading Strategies Inventory (MARSI) and the Survey of Reading Strategies (SORS), have been formulated and validated to gauge the awareness of such strategies [17, 18].

Empirical studies have invariably evidenced a positive affiliation between the application of metacognitive strategies and reading proficiency among both native and non-native readers. It has been observed that more skilled readers employ a wider range of metacognitive strategies, reflecting a sophisticated and flexible approach to reading [19, 20].

Educational interventions emphasizing metacognitive strategy utilization have proven fruitful in augmenting reading comprehension across various learner demographics, including Iranian and Japanese EFL learners and committed college developmental readers [21, 22, 23]. Moreover, these metacognitive strategies have been recognized to amplify other language abilities, such as listening comprehension and writing performance [24, 25].

A variety of techniques, such as modeling, explicit instruction, guided practice, and reciprocal teaching, have been identified as potent methods to cultivate metacognitive reading strategies [26, 27]. The assimilation of these strategies into collective learning activities has also exhibited potential, underscoring the advantages of a dynamic, learner-focused approach.

The shift to digital learning in response to the COVID-19 pandemic has necessitated modifications in metacognitive strategies and has offered novel avenues to investigate these strategies in a digital environment [1, 2]. Preliminary research has begun to illuminate effective pedagogical strategies in this fresh learning context, albeit more exploration is warranted to fully exploit the potential of online metacognitive strategies.

Despite the acknowledged value of metacognitive strategies, cultural and contextual determinants can impact their deployment. For example, the Iranian EFL setting presents unique hurdles, such as restricted access to authentic English materials, reliance on conventional teaching methodologies, and the effect of cultural norms on learning behaviors. These factors emphasize the necessity for a custom approach to incorporating metacognitive reading strategies into the curriculum, an aspect that this review intends to probe extensively.

In sum, metacognitive strategies form the backbone of reading comprehension, especially for EFL learners. However, additional research is required to comprehend how to optimally advocate these strategies among diverse learner cohorts, in varying cultural contexts, and within the continually evolving terrain of online learning.

## Methodology

### Review Methodology

This systematic review conforms to a rigorous methodological protocol to pinpoint and analyze studies probing the deployment of metacognitive reading strategies (MRS) and their consequential impacts on reading comprehension in EFL learners. A comprehensive literature search was conducted across renowned databases such as Web of Science, Scopus, and ERIC. These databases were methodically scrutinized for articles honing in on metacognitive reading strategies within EFL contexts. The search technique comprised a blend of keywords and phrases like "metacognitive reading strategies," "EFL learners," "reading comprehension," and "systematic review." The exact search sequence employed was: ("metacognitive reading strategies" OR "metacognition") AND ("EFL learners" OR "ESL learners") AND "reading comprehension."

### Inclusion and Exclusion Criteria

Our criterion for selecting studies for this systematic review was anchored in a stringent set of principles. In pursuit of academic robustness and quality, we incorporated solely peer-reviewed articles. The publication date emerged as another salient determinant. Our primary focus was on articles published between 2000 and 2021 to encapsulate contemporary research within this 21-year timeframe. Nevertheless, seminal and foundational works published before 2000 were also incorporated when they presented key theories or frameworks pivotal to the study. In light of the global scope of our review, we ensured that all studies were penned in English to ensure uniform interpretation and understanding across studies.

Our review was fundamentally anchored in empirical studies scrutinizing metacognitive reading strategies in EFL/ESL contexts. We verified that these articles furnished ample data on the strategies deployed and their impact on reading comprehension. To ensure a comprehensive overview of the evidence at hand, our research approach included a diverse selection of

study designs, encompassing everything from experimental and quasi-experimental to observational investigations. Furthermore, we necessitated that studies provide lucid operational definitions of metacognitive reading strategies, which is vital for juxtaposing and contrasting results across studies.

Conversely, we delineated precise boundaries for our review by excluding certain types of studies. For instance, we abstained from including studies that were not precisely targeted at EFL/ESL learners, such as those aimed at learners of languages other than English. We also excised review articles, theoretical papers, book chapters, and conference proceedings to ensure that our review was founded on primary, empirical research exclusively.

### Data Extraction and Analysis

Once the pertinent articles were identified, data extraction ensued. This process involved collecting essential information from each study, such as the authors, publication year, study design, participants, metacognitive reading strategies employed, and the implications of these strategies on reading comprehension.

The findings from the included studies were subsequently assembled based on the type of metacognitive reading strategies and their effects on reading comprehension. This classification was executed iteratively to identify recurring themes and patterns across the studies.

Upon categorization, an amalgamation of the findings was undertaken. This synthesis employed both qualitative (thematic analysis) and quantitative (meta-analysis where applicable) techniques to evaluate the overall impact of metacognitive reading strategies on EFL learners' reading comprehension. This comprehensive approach permitted the exploration of the effectiveness of specific strategies and the identification of potential knowledge voids in the literature.

### Results

### Exploring and Classifying Metacognitive Reading Strategies

Metacognitive reading strategies (MRS) play an essential part in enhancing reading comprehension, granting learners the tools required to actively oversee their cognitive processes, thereby maximizing understanding [3, 8]. This proves particularly instrumental for learners of English as a Foreign Language (EFL), facilitating the process of text comprehension in a non-native language [28, 29].

Metacognition encapsulates two core elements: metacognitive knowledge and metacognitive regulation [3, 30]. The former sheds light on learners' awareness of their cognitive functions, while the latter revolves around the self-regulation of these processes to achieve learning goals [15]. MRS are a subset of metacognitive regulation, with a specific focus on the reading process [31, 10].

Numerous approaches to classifying MRS exist, with many studies offering unique frameworks [5, 7, 32].

However, a general agreement appears to have been reached, with most literature categorizing MRS into planning, monitoring, and evaluating [16, 6, 26].

### Planning

Planning strategies are employed to set reading goals, craft the approach to a text, and stimulate relevant background knowledge before reading [16, 10]. This category includes strategies such as previewing the text, anticipating its content, defining the reading purpose, and allocating time and effort appropriately [27, 33]. Such strategies play a crucial role in directing EFL learners' attention and enhancing their motivation and engagement during the reading process [11, 34].

### Monitoring

Monitoring strategies aid in the continuous appraisal of comprehension as the reading unfolds [32]. These strategies assist learners in recognizing comprehension challenges, identifying difficult text sections, and assessing whether reading goals are being met [31, 20]. Techniques such as rereading, asking questions, modulating reading speed, and utilizing context clues to infer meaning fall under this category [12, 2].

### Evaluating

Evaluating strategies allows for post-reading reflection on the reading process, enabling learners to assess the effectiveness of used strategies and the overall understanding achieved [22, 33]. These strategies enable learners to measure their success in meeting reading objectives, identify areas for improvement, and map the trajectory for future learning [23, 35]. This category includes summarizing, identifying the main ideas, appraising the relevance of the text, and assessing the effectiveness of the strategies used [21, 25].

Empirical studies have delved into the application and effectiveness of MRS in EFL learning contexts [5, 17, 19]. Evidence consistently points to a positive correlation between the usage of MRS and reading comprehension performance, especially among EFL learners [36, 24]. Proficient readers often exhibit a higher level of metacognitive strategy awareness and application compared to their less proficient counterparts [37, 38].

The incorporation of metacognitive strategy instruction has also demonstrated promising results in improving EFL learners' reading comprehension skills [9, 21]. For instance, Thongwichit and Buripakdi [26] found that the use of a modeling technique for instructing metacognitive reading strategies significantly improved learners' reading comprehension in an ESP class at a tertiary level. Similarly, Meniado [33] found a significant correlation between the use of MRS and reading comprehension performance among Saudi EFL learners, with motivation playing a vital role.

Past research emphasizes the need to elevate learners' awareness of MRS to foster self-direction in the learning process [31, 18]. By enhancing their metacognitive awareness, learners are better equipped

to regulate their reading comprehension and make informed decisions about the strategies they employ [4, 6].

To encapsulate, MRS are vital cognitive tools that foster enhanced reading comprehension among EFL learners. These strategies, broadly divided into planning, monitoring, and evaluating, have consistently demonstrated a positive impact on reading comprehension performance. Hence, educators should prioritize the development and application of MRS in their instructional practices to better support EFL learners' reading comprehension and overall language proficiency.

### Impact of Metacognitive Reading Strategies on Reading Comprehension

The positive contribution of metacognitive reading strategies (MRS) in augmenting the reading comprehension capabilities of English as a Foreign Language (EFL) learners has been substantiated in numerous scholarly works [36, 19]. A comprehensive analysis of relevant literature delineates the critical outcomes and implications of applying MRS within EFL reading comprehension contexts.

The utilization of MRS has been invariably associated with enhanced reading comprehension results [31, 10]. Conspicuously, explicit metacognitive strategy training has proven particularly beneficial; for instance, Dhieb-Henia [9] exhibited that such training appreciably bolstered EFL learners' comprehension of research articles within an English for Specific Purposes (ESP) setting. In harmony with these findings, Iwai [21] affirmed the positive impacts of MRS on EFL/ESL learners' reading comprehension.

An instrumental study by Meniado [33] pinpointed MRS usage and learner motivation as significant determinants of reading comprehension performance among Saudi EFL learners. Correspondingly, Mohammadi [12] disclosed that the employment of MRS was inversely correlated with test anxiety among occupational health students, further reinforcing the multi-dimensional benefits of these strategies.

The adoption of MRS has been found to fluctuate according to the proficiency level and gender of EFL learners. Proficient readers typically exhibit a higher degree of metacognitive awareness and utilize a broader range of reading strategies compared to less proficient readers [37, 38]. Gender-centric studies, such as Deliany and Cahyono [20], imply that female students generally demonstrate a higher level of MRS awareness and usage than their male counterparts. However, the impact of these gender disparities on reading comprehension performance remains somewhat uncertain and calls for more in-depth exploration.

Research also accentuates the effectiveness of metacognitive strategy instruction in improving the reading comprehension of EFL learners, particularly those with lower proficiency levels [26, 24]. The merits of such instruction have been stressed in remote learning contexts as well, with Rianto [2] reporting an enhancement in the metacognitive online reading strategies of Indonesian EFL university students during the Covid-19 pandemic.

Fostering learners' cognizance of MRS has been shown to stimulate autonomy in the learning process [31, 18]. This awareness empowers learners to proficiently regulate their reading comprehension and make informed decisions about the strategies they implement [4, 6].

In sum, the literature robustly endorses the beneficial impacts of MRS on EFL learners' reading comprehension. These strategies have shown exceptional effectiveness for lower-proficiency learners and in remote learning settings. The findings also emphasize the significance of nurturing metacognitive awareness among learners and integrating MRS instruction into EFL curricula. This integration could enhance reading comprehension performance and contribute to learners' overall well-being and self-confidence in the learning process.

Nonetheless, existing knowledge harbors certain gaps. The influence of gender differences on reading comprehension performance remains nebulous [20], indicating a necessity for further research that elucidates the implications of these differences for teaching practices. Future research should also investigate potential crosslinguistic constraints on second language reading development [28], considering that MRS might be affected by learners' first language reading experiences and proficiency. Given these gaps, subsequent studies could delve into the role of first language (L1) reading skills in the cultivation of metacognitive reading strategies among EFL learners.

In essence, the literature reviewed underscores the momentous role of metacognitive reading strategies in amplifying EFL learners' reading comprehension skills. It advocates for the fostering of metacognitive awareness and strategy usage among learners, particularly those with lower proficiency levels and in remote learning environments. There is an explicit call for the inclusion of metacognitive reading strategy instruction in EFL curricula, as this can contribute to creating autonomous, confident readers adept at circumventing the challenges of second language reading. However, more probing is needed, especially in comprehending how gender differences and first language reading skills influence the application and efficacy of these strategies.

### Techniques for Fostering Metacognitive Reading Strategies in EFL Learners

A plethora of pedagogical tactics can contribute to the growth of metacognitive reading strategies (MRS) among EFL students, with scholarly works especially emphasizing the significance of explicit instruction, exemplification and support, and cooperative learning activities.

### Explicit Instruction

Anthonysamy [1] and Ali & Razali [27] underscore the role of explicit instruction as a method involving

forthright teaching about MRS, elucidating their objectives and applications. Recognized advantages encompass enhanced comprehension and proactive engagement with these strategies, leading to improved reading comprehension [22, 10]. Dhieb-Henia's [9] study offers convincing evidence, associating explicit MRS training with improved EFL learners' comprehension in an ESP setting.

### Modeling and Scaffolding

Exemplification and support serve as integral parts of MRS instruction [26]. Exemplification allows learners to witness how proficient readers use MRS to boost comprehension [16], while support provides progressive guidance and assistance, encouraging independent strategy application [8, 6]. Research by Thongwichit and Buripakdi [26] and Milliner and Dimoski [24] illustrate the efficacy of these techniques in enhancing comprehension and self-confidence among EFL learners.

### Collaborative Learning Activities

Wang et al. [34] and Şen [11] spotlight cooperative learning activities, including group debates and problem-solving tasks, as beneficial for MRS development. These activities encourage strategy exchange, peer feedback, and metacognitive consciousness [14], fostering more effective MRS utilization.

In conclusion, scholarly works fervently recommend incorporating explicit instruction, exemplification and support, and cooperative learning activities into EFL curricula to bolster reading comprehension [10, 26, 24].

Looking ahead, it is essential for educators to prioritize MRS development in their teaching practices. Explicit training, exemplification, and providing cooperative learning opportunities can equip EFL learners with the necessary metacognitive skills [31, 29, 30].

Additional research should examine the long-term effects of MRS instruction and the optimal ways to integrate it into EFL curricula. A comprehension of how personal variances like prior language experiences, cultural backgrounds, and individual beliefs about reading influence engagement with MRS would assist educators in devising more personalized and effective strategies [15, 2, 37].

In summary, the systematic review emphasizes the effectiveness of explicit instruction, exemplification and support, and cooperative learning activities in cultivating MRS among EFL learners. Embedding these techniques into EFL curricula can aid metacognitive reading strategy development, encouraging improved reading comprehension and overall language proficiency.

### The Iranian EFL Context: Challenges and Metacognitive Reading Strategies

Iranian EFL learners encounter distinctive challenges that influence their capacity to engage effectively with metacognitive reading strategies (MRS). Two main factors molding this context are the learning environment and cultural influences.

### Challenges in the Learning Environment

A prominent challenge Iranian EFL learners confront in acquiring English proficiency is the scarcity of exposure to authentic English resources in their learning environment [10]. This constraint can impede the development of essential reading comprehension skills. Further, the traditional Iranian educational approach often favors rote learning and memorization over exploratory and critical thinking skills, potentially restricting students' engagement with MRS [12]. These educational practices may inadvertently cause Iranian EFL learners to lack the metacognitive awareness crucial for effective English text comprehension [10].

### The Role of Cultural Factors in Strategy Use

Cultural elements also impact MRS usage among Iranian EFL learners. As Magogwe [37] points out, learners' cultural backgrounds mold their beliefs about reading and learning, influencing their metacognitive strategy engagement. A tendency among Iranian learners to view reading as a passive activity centered on deciphering words rather than interactive cognitive engagement [35] may discourage them from using MRS that promote profound comprehension and critical thinking [27].

Despite these hurdles, understanding the cultural and educational factors shaping Iranian EFL learners' MRS usage presents an opportunity for tailored pedagogical interventions. Future research could concentrate on how to adjust MRS instruction to these unique cultural and educational contexts, potentially fostering a more effective and engaging learning experience for Iranian EFL students.

In summary, the Iranian EFL context, distinguished by specific challenges in the learning environment and cultural influences, plays a significant role in shaping metacognitive reading strategy use. Acknowledging and addressing these factors is crucial to fostering effective MRS usage among Iranian EFL learners, ultimately enhancing their English reading comprehension and overall language proficiency.

### Discussion

### Interpretation of Key Findings

### Effects of Metacognitive Reading Strategies on EFL Learners' Reading Comprehension

The conclusions drawn from this review steadfastly assert the critical role of metacognitive reading strategies in bolstering English as a Foreign Language (EFL) learners' reading comprehension, validating earlier research by Phakiti [36] and Zhang & Seepho [19]. This harmony across the literature amplifies our grasp of the affirmative relationship between the employment of metacognitive reading strategies and enhanced reading comprehension, as earlier reported by Anderson [31] and Tavakoli [10].

The favorable effect of metacognitive strategy instruction is conspicuous, with Dhieb-Henia [9] and Iwai [21] recording remarkable improvement in

reading comprehension among EFL learners. These findings propose that a methodical and candid approach to teaching metacognitive strategies can result in significant progress in learners' reading comprehension performance.

Our review also points out a noteworthy finding by Meniado [33], who recognized metacognitive reading strategies and motivation as significant predictors of reading comprehension among Saudi EFL students. This conclusion is aligned with Mohammadi's [12] study, further stressing the importance of metacognitive reading strategies in diminishing test anxiety, thereby suggesting these strategies' comprehensive effect on learners' performance and well-being.

Interestingly, the application of metacognitive reading strategies seems to fluctuate with proficiency levels, as proficient readers demonstrate higher degrees of metacognitive awareness and strategy use [37, 38]. This is a crucial finding, as it proposes that metacognitive awareness and strategy use are potentially key contributors to reading proficiency among EFL learners.

The role of gender in the use of metacognitive reading strategies is another intriguing aspect to contemplate. Although female students demonstrate higher levels of metacognitive reading strategies awareness and use [20], the impact of gender on reading comprehension performance appears to be less defined. This indicates that while metacognitive strategy use varies by gender, it does not necessarily translate into significant differences in reading comprehension outcomes.

In summary, the conclusions from this systematic review underscore the transformative role of metacognitive reading strategies in improving EFL learners' reading comprehension. The positive implications of these strategies stretch beyond improving reading comprehension, also alleviating test anxiety, fostering learner autonomy, and contributing to learners' self-confidence in the learning process. As such, the importance of metacognitive reading strategies in supporting EFL learners' reading development cannot be understated. However, the influence of learners' first language reading experiences, proficiency levels, and gender on their use of metacognitive strategies necessitates further investigation to enable a more nuanced understanding of these relationships.

## Effective Teaching Methods for Metacognitive Reading Strategies

The conclusions of this review shed light on the prominent role of explicit instruction, modeling and scaffolding, and collaborative learning activities in fostering metacognitive reading strategies among EFL learners, validating earlier research that emphasizes the importance of these techniques [10, 26, 24].

The effectiveness of explicit instruction, as outlined by Anthonysamy [1], is a testament to the power of clarity and directness in pedagogy. As learners gain a clearer insight into the objectives and application of

metacognitive reading strategies, they become more inclined to actively implement these techniques, thereby enhancing their reading comprehension skills [27, 9]. This underscores the value of transparency and intentionality in educational practices, reinforcing the assertion that teaching is as much about igniting curiosity and autonomy as it is about conveying information.

Modeling and scaffolding, as pedagogical tools, bridge the gap between theory and practice, allowing students to witness and then enact the application of metacognitive strategies in authentic reading contexts [26, 16]. This gradual, supportive approach aligns with Vygotsky's zone of proximal development, emphasizing the importance of guidance in the learning process [8, 6]. Indeed, learners' confidence can be significantly boosted when they are granted the opportunity to gradually assume control of their learning process.

Furthermore, collaborative learning activities, according to Wang et al. [34], facilitate a communal approach to the cultivation of metacognitive reading strategies. This method not only provides a platform for students to share, observe, and receive feedback on their strategy use but also allows them to become more aware of their metacognitive processes [11, 14]. In this sense, the social aspect of learning is harnessed to foster self-awareness and peer-supported growth.

Interestingly, the reviewed literature also hints at the potential for metacognitive strategy instruction to contribute to improvements in other language skills, such as listening and writing [25, 24]. This reveals the interconnectedness of language skills, indicating the need for a holistic approach in language pedagogy [28].

Moreover, the influence of metacognitive reading strategy instruction on learners' motivation and self-efficacy warrants attention [33, 12]. It is crucial to recognize the potential of metacognitive strategies to enhance learners' self-confidence and drive to engage in reading activities, underscoring the psychological dimensions of language learning [4].

In light of these conclusions, the implications for future research are abundant. Investigations into the long-term benefits of metacognitive reading strategy instruction, the most effective ways to integrate this instruction into EFL curricula, and the role of individual differences in metacognitive reading strategy development and use are essential to further inform and refine educational practices [32, 15].

## Specific Challenges and Strategies for Iranian EFL Learners

The backdrop of English as a Foreign Language (EFL) learning in Iran, replete with its unique hurdles, greatly shapes the effective employment of metacognitive reading strategies. A principal bottleneck that Iranian EFL learners often grapple with is the lack of extensive exposure to authentic English language resources in their learning ecosystems, which can thwart the cultivation of strong reading

comprehension skills [10]. Additionally, an education system that leans heavily towards rote learning, ironically, does not stimulate sufficient utilization of metacognitive strategies, creating a gap in metacognitive awareness among these learners [12].

Cultural dynamics also wield substantial sway over the metacognitive strategy adoption of Iranian EFL learners. According to Magogwe's [37] research, cultural bearings can shape students' reading perspectives, in turn affecting their interaction with metacognitive strategies. Iranian students may lean more towards perceiving reading as a passive decoding task rather than an active cognitive pursuit demanding profound comprehension and critical thought [35]. This skewed perception could curtail the efficacious application of metacognitive strategies during their reading [27].

To counter these challenges, we must weave metacognitive reading strategy instruction into the fabric of the Iranian EFL curriculum. Empirical evidence underlines that such instruction significantly amplifies reading comprehension among Iranian EFL learners [10, 12]. Consequently, employing lucid instruction, modeling, and scaffolding techniques may prove instrumental in bolstering metacognitive reading strategy awareness and application among Iranian EFL learners [1, 26]. Furthermore, collaborative learning endeavors can stimulate metacognitive strategy growth by fostering peer interaction and introspection on reading processes [24].

Acknowledging the role of cultural factors in strategy use, the curriculum should infuse culturally resonant materials and activities [2]. Such elements can aid Iranian EFL learners in refining their understanding of the reading process and motivate the use of metacognitive strategies in harmony with their cultural viewpoints [37].

Furthermore, a holistic approach to metacognitive strategy instruction is mandated, embracing multiple language skills like listening and writing. This integrative approach can nurture the comprehensive language proficiency development of Iranian EFL learners [25, 24, 28].

To sum up, the Iranian EFL learning environment calls for distinctive instructional strategies mindful of both the educational and cultural landscapes of the learners. Integration of metacognitive reading strategy instruction into the curriculum, use of culturally pertinent materials, and a comprehensive approach to language skill development can empower Iranian EFL learners to surmount these challenges and bolster their reading comprehension competencies. Further probing into the enduring benefits and optimal methods of weaving metacognitive instruction into the Iranian EFL context is encouraged.

## Implications for EFL Instruction and the Iranian EFL Curriculum

### General Implications for EFL Instruction

A standout revelation from our investigation is the vital role of infusing metacognitive reading strategies into general EFL instruction. Existing research corroborates the fact that adopting these strategies in EFL classrooms can assist learners in becoming cognizant of their mental processes, thereby improving their capability to supervise and regulate their learning and ultimately enhancing their reading comprehension performance [31, 17, 10].

To facilitate these gains, EFL educators should offer explicit instruction on metacognitive strategies, cultivate a supportive learning milieu that promotes introspection on reading processes and peer dialogue, and take into account the varied backgrounds and individual disparities of learners when implementing instruction [19, 35, 38, 33].

## Specific Implications for the Iranian EFL Curriculum

In the context of Iranian EFL learners, the incorporation of metacognitive reading strategy (MRS) instruction into their curriculum is particularly crucial. Research has proven the potency of this approach in considerably bolstering their reading performance [10, 12].

To actualize MRS instruction, Iranian EFL tutors are encouraged to adopt explicit instruction, modeling, scaffolding methods, and collaborative learning activities. These techniques can encourage MRS awareness and application among students, facilitating strategy exchange and reflection on reading processes [1, 26, 24].

Considering the influence of cultural factors on strategy use, it is advisable to integrate culturally relevant materials and activities into the Iranian EFL instruction [2]. This approach can aid students in developing a nuanced understanding of the reading process and encourage the deployment of MRS aligned with their cultural roots [37].

The curriculum should also underscore the necessity to extend MRS instruction across diverse language skills, such as listening and writing [25, 24]. A comprehensive approach to MRS instruction equips educators to support their students in cultivating overall language proficiency [28].

In conclusion, the assimilation of metacognitive reading strategies into both general EFL instruction and the specific Iranian EFL curriculum is vital for augmenting learners' reading comprehension. With apt strategies and consideration for cultural factors, students can realize significant advancements in reading comprehension, amplifying their overall language proficiency and academic success.

## Limitations of the Current Review

Despite the extensive coverage of this systematic review, several constraints must be recognized. Firstly, while focusing on Iranian EFL learners has provided unique insights into the metacognitive reading strategies in this specific setting, it may inadvertently restrict the extrapolation of the findings to other EFL learning contexts. Varying countries and

cultures may pose distinct challenges and opportunities regarding the use and effectiveness of metacognitive reading strategies that were not contemplated in this review [37].

Secondly, the review primarily hinged on published academic papers, possibly bypassing critical insights from grey literature, such as conference proceedings, dissertations, and non-published research reports. This focus could introduce a publication bias, where studies with substantial findings are more likely to be published and incorporated in the review, possibly biasing the overall findings.

Thirdly, the review was bound by the methodologies of the incorporated studies. The majority were cross-sectional, curbing our capacity to infer the long-term effects of metacognitive reading strategy instruction and the progression of students' strategy use over time [31, 10].

Fourthly, while individual variations among learners were considered, the absence of detailed demographic information (for example, age, gender, socioeconomic status, or educational background) in some of the reviewed studies may impede our understanding of how these factors may impact the use and effectiveness of metacognitive reading strategies [38, 33].

Despite these constraints, the current review offers a thorough synthesis of the existing literature on metacognitive reading strategies in EFL learning, especially in the Iranian setting, and lays a solid groundwork for future research in this domain.

### Suggestions for Future Research

Subsequent research concerning metacognitive reading strategies and their influence on EFL learners' reading comprehension could profit from longitudinal studies to monitor the development of these strategies over time. Most studies to this point have been conducted in a cross-sectional manner, making it challenging to infer the enduring effects of metacognitive reading strategy instruction and the evolution of students' strategy application [31, 10]. The exploration of these strategies' efficacy through longitudinal studies could yield profound insights into their long-term influence on students' reading comprehension performance.

Another promising direction for future research is the examination of individual differences in metacognitive strategy usage among EFL learners. Previous studies have suggested that learners' metacognitive awareness and strategy application might fluctuate depending on factors such as reading proficiency, language background, and motivation [38, 33, 12]. Moreover, studies have demonstrated that individual discrepancies in metacognitive knowledge and regulation can sway students' overall academic performance [25, 15]. Consequently, it is vital for future research to explore the role of individual differences in metacognitive reading strategy use among EFL learners, as this could lead to the development of more personalized instructional

approaches and interventions for promoting reading comprehension.

In summary, it is of paramount importance to further investigate individual variations in the usage of metacognitive reading strategies and conduct longitudinal studies. These steps are crucial to comprehend the intricacies of EFL learners' reading comprehension and the efficiency of metacognitive strategy instruction. These research efforts will undoubtedly aid in the continuous development of empirically supported practices and innovative pedagogical methods within applied linguistics.

## Conclusion

### Summary of Key Findings

In conclusion, this systematic review elucidates several pivotal aspects pertaining to the function of metacognitive reading strategies in ameliorating EFL learners' reading comprehension, particularly spotlighting the Iranian scenario.

This study has validated that the employment of metacognitive reading strategies - encompassing planning, monitoring, and evaluation phases - considerably fortifies EFL learners' reading comprehension abilities [31, 10]. These strategies induce an active engagement with the text and foster a profound understanding of the content, thereby enriching the reading experience [3, 4].

In the context of Iranian EFL learners, the review has unmasked specific impediments such as constrained access to genuine English resources, conventional pedagogical techniques that propagate rote learning, and culturally shaped metacognitive strategy application [10, 12, 37]. Interestingly, the integration of metacognitive reading strategy instruction within the Iranian EFL curriculum has demonstrated the potential to assist learners in overcoming these hurdles and enhance their reading comprehension skills [10, 12].

In the realm of imparting metacognitive reading strategies, explicit instruction supplemented with modeling and scaffolding has been pinpointed as an effective methodology [1, 26]. Additionally, the incorporation of collaborative learning activities encourages learners to share strategies and reflect on their reading processes, thereby nurturing the expansion of metacognitive strategies [24].

Lastly, the pronounced influence of cultural aspects on the deployment of metacognitive strategies amongst EFL learners is underscored [37]. To address this issue, the review proposes that EFL educators should embed culturally pertinent content and activities into their instruction [2]. This approach yields a dual benefit - it advocates a holistic understanding of the reading process, and it promotes the employment of metacognitive strategies that align with learners' cultural backdrops.

The review succinctly accentuates the crucial role of metacognitive reading strategy instruction in ameliorating reading comprehension among EFL learners, especially within the Iranian context. It

suggests that the successful fusion of these strategies into pedagogical practices and curricula would efficaciously amplify students' reading comprehension skills and overall language competency.

**Significance of the Study**

The present systematic review bears considerable significance, both academically and pedagogically, by illuminating the impact of metacognitive reading strategies on EFL learners' reading comprehension, predominantly those in the Iranian setting.

Academically, this review enriches the extant body of literature by offering a thorough exploration of research on metacognitive reading strategies in EFL environments. It transcends merely affirming the advantageous role of these strategies in boosting reading comprehension [31, 10]. The study also investigates the unique challenges encountered by Iranian EFL learners and underlines the necessity of cultural pertinence in the application of metacognitive strategies [10, 12, 37]. Thus, it adds a layer of complexity and specificity to our comprehension of metacognitive reading strategies in EFL learning.

Pedagogically, the study bears importance by providing actionable insights for EFL instructors. The findings advocate the incorporation of explicit instruction, modeling, and scaffolding in teaching metacognitive reading strategies [1, 26]. Furthermore, the review highlights the efficacy of collaborative learning activities in fostering the evolution of metacognitive strategies among learners [24]. Hence, the study serves as a practical handbook for EFL educators striving to enhance their students' reading comprehension abilities and overall language proficiency.

Innovatively, this review highlights the critical interrelation between culture and metacognitive strategy usage. By suggesting the inclusion of culturally relevant materials and activities into

instruction [2], the study stretches the limits of traditional EFL pedagogy. It impels EFL educators to consider learners' cultural backgrounds as an asset rather than a hurdle, fostering a more inclusive and effective learning environment.

In conclusion, this systematic review contributes a valuable addition to both the academic discourse on metacognitive reading strategies and the pedagogical practices of EFL educators. By underscoring the importance of these strategies and providing practical suggestions for their implementation, the study stands to significantly influence EFL learning, particularly in the Iranian context.

**Final Thoughts and Reflections**

Upon introspecting on the exhaustive research carried out in this systematic review, it becomes abundantly clear that metacognitive reading strategies are integral to augmenting reading comprehension among EFL learners, notably those situated within the Iranian context. The distinctive challenges encountered by these learners underscore the imperative for a nuanced and culturally attuned pedagogical methodology in imparting these strategies [37, 2].

The discoveries of this investigation resonate with Flavell's cognitive theory of metacognition [3], reinforcing the essentiality of active engagement with texts for a more profound comprehension. The strategies of planning, monitoring, and assessing the reading process emerge as critical elements in effective EFL learning.

Reflecting upon the progression of this systematic review, it is undeniable that the domain of EFL teaching is not fixed but rather dynamic, necessitating perpetual learning, adaptation, and innovation. The need to infuse culturally relevant instruction and to adapt teaching methodologies in alignment with learner needs is a testament to the evolving character of this field.

**References**

[1]	Anthonysamy, L. (2021). The use of metacognitive strategies for undisrupted online learning: Preparing university students in the age of pandemic. Education and information technologies, 26(6), 6881-6899.

[2]	Rianto, A. (2021). Indonesian EFL university students' metacognitive online reading strategies before and during the Covid-19 pandemic. Studies in English Language and Education, 8(1), 16-33.

[3]	Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. American psychologist, 34(10), 906.

[4]	Paris, S. G., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. Dimensions of thinking and cognitive instruction, 1, 15-51.

[5]	Carrell, P. L. (1989). Metacognitive awareness and second language reading. The modern language journal, 73(2), 121-134.

[6]	Chamot, A. U. (2005). Language learning strategy instruction: Current issues and research. Annual review of applied linguistics, 25, 112-130.

[7]	Mokhtari, K., & Reichard, C. A. (2002). Assessing students' metacognitive awareness of reading strategies. Journal of educational psychology, 94(2), 249.

[8]	Anderson, N. J. (2002). The Role of Metacognition in Second Language Teaching and Learning. ERIC Digest.

[9]	Dhieb-Henia, N. (2003). Evaluating the effectiveness of metacognitive strategy training for reading research articles in an ESP context. English for Specific Purposes, 22(4), 387-417.

[10]	Tavakoli, H. (2014). The effectiveness of metacognitive strategy awareness in reading comprehension: The case of Iranian university EFL students. Reading, 14(2), 314-336.

[11]	Şen, H. Ş. (2009). The relationship between the use of metacognitive strategies and reading

comprehension. Procedia-Social and Behavioral Sciences, 1(1), 2301-2305.

[12]     Mohammadi, B. (2015). The relationship between metacognitive reading strategies and test anxiety in students of occupational health. Development Strategies in Medical Education, 2(2), 55-63.

[13]     Mustajab Ahmed, R. (2020). Investigating EFL learners' awareness of cognitive and metacognitive reading strategies of students in different disciplines. Arab World English Journal (AWEJ) Volume, 11.

[14]     Moore, P. J. (1982). Children's metacognitive knowledge about reading: A selected review. Educational Research, 24(2), 120-128.

[15]     Winne, P. H. (1996). A metacognitive view of individual differences in self-regulated learning. Learning and individual differences, 8(4), 327-353.

[16]     Hartman, H. J. (Ed.). (2001). Metacognition in learning and instruction: Theory, research, and practice (Vol. 19). Springer Science & Business Media.

[17]     Mokhtari, K., & Sheorey, R. (2002). Measuring ESL students' awareness of reading strategies. Journal of developmental education, 25(3), 2-11.

[18]     Sheorey, R., & Mokhtari, K. (2001). Differences in the metacognitive awareness of reading strategies among native and non-native readers. System, 29(4), 431-449.

[19]     Zhang, L., & Seepho, S. (2013). Metacognitive strategy use and academic reading achievement: insights from a Chinese context. Electronic Journal of Foreign Language Teaching, 10(1).

[20]     Deliany, Z., & Cahyono, B. Y. (2020). Metacognitive reading strategies awareness and metacognitive reading strategies use of EFL university students across gender. Studies in English Language and Education, 7(2), 421-437.

[21]     Iwai, Y. (2011). The effects of metacognitive reading strategies: Pedagogical implications for EFL/ESL teachers. Reading, 11(2), 150-159.

[22]     Takallou, F. (2011). The effect of metacognitive strategy instruction on EFL learners' reading comprehension performance and metacognitive awareness. Asian EFL Journal, 13(1).

[23]     Hong-Nam, K., & Leavell, A. G. (2011). Reading strategy instruction, metacognitive awareness, and self-perception of striving college developmental readers. Journal of College Literacy and Learning, 37, 3-17.

[24]

Milliner, B., & Dimoski, B. (2021). The effects of a metacognitive intervention on lower-proficiency EFL learners' listening comprehension and listening self-efficacy. Language Teaching Research, 13621688211004646.

[25]     Teng, F. (2020). The role of metacognitive knowledge and regulation in mediating university EFL learners' writing performance. Innovation in Language Learning and Teaching, 14(5), 436-450.

[26]     Thongwichit, N., & Buripakdi, A. (2021). A Glimpse of Metacognitive Reading Strategy Instruction through Modeling Technique in ESP Class at the Tertiary Level. LEARN Journal: Language Education and Acquisition Research Network, 14(1), 118-145.

[27]     Ali, A. M., & Razali, A. B. (2019). A Review of Studies on Cognitive and Metacognitive Reading Strategies in Teaching Reading Comprehension for ESL/EFL Learners. English Language Teaching, 12(6), 94-111.

[28]     Koda, K. (2007). Reading and language learning: Crosslinguistic constraints on second language reading development. Language learning.

[29]     Oakhill, J., Cain, K., & Elbro, C. (2014). Understanding and teaching reading comprehension: A handbook. Routledge.

[30]     Veenman, M. V., Van Hout-Wolters, B. H., & Afflerbach, P. (2006). Metacognition and learning: Conceptual and methodological considerations. Metacognition and learning, 1, 3-14.

[31]     Anderson, N. J. (2004). Metacognitive reading strategy awareness of ESL and EFL learners. The CATESOL Journal, 16(1), 11-27.

[32]     Afflerbach, P., Pearson, P. D., & Paris, S. G. (2008). Clarifying differences between reading skills and reading strategies. The reading teacher, 61(5), 364-373.

[33]     Meniado, J. C. (2016). Metacognitive Reading Strategies, Motivation, and Reading Comprehension Performance of Saudi EFL Students. English Language Teaching, 9(3), 117-129.

[34]     Wang, J., Spencer, K., & Xing, M. (2009). Metacognitive beliefs and strategies in learning Chinese as a foreign language. System, 37(1), 46-56.

[35]     Darjito, H. (2019). Students' Metacognitive Reading Awareness and Academic English Reading Comprehension in EFL Context. International Journal of Instruction, 12(4), 611-624.

[36]     Phakiti, A. (2003). A closer look at the relationship of cognitive and metacognitive strategy use to EFL reading achievement test performance. Language testing, 20(1), 26-56.

[37]     Magogwe, J. M. (2013). Metacognitive awareness of reading strategies of the University of Botswana English as Second Language students of different academic reading proficiencies. Reading & Writing-Journal of the Reading Association of South Africa, 4(1), 1-8.

[38]     Al-Mekhlafi, A. M. (2018). EFL Learners' Metacognitive Awareness of Reading Strategies. International Journal of Instruction, 11(2), 297-308.