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A SYSTEMATIC REVIEW OF TRENDS AND PRACTICES IN METACOGNITIVE STRATEGIES RESEARCH IN ENGLISH LANGUAGE TEACHING

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Abstract: Metacognitive strategies have increasingly gained attention in the English language teaching (ELT) field due to their potential to enhance learners' autonomy and language proficiency. Nevertheless, a comprehensive synthesis of existing studies examining the application of these strategies in ELT remains absent. Filling this gap, this study systematically reviewed the prevailing trends, methodological patterns, and key findings in research on metacognitive strategies in ELT. A total of 20 peer-reviewed articles published between

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2010 and 2022 were selected based on predetermined inclusion and exclusion criteria from a single database, Scopus. This review followed the PRISMA framework to guide the identification, screening, and selection of studies, which were then examined using a content analysis method. The analysis disclosed that research on metacognitive strategies in ELT gained popularity in 2014 and peaked in 2020. Most studies were carried out in Asian countries and involved undergraduates as participants, with experimental research design being the most frequently employed method. Furthermore, the study found that reading comprehension was the most researched language skill. The study also uncovered several challenges regarding the use of metacognitive strategies, including time management, limited knowledge of metacognitive strategies, and lack of metacognitive awareness. This study emphasizes the necessity for a broader range of research contexts and skills, offering practical insights to assist ELT practitioners and guide future studies in this field.

Keywords: *English language teaching, metacognitive awareness, metacognitive regulation, metacognitive strategies, systematic review*

INTRODUCTION

The field of English language teaching (ELT) has evolved substantially alongside a growing understanding of language acquisition, with metacognition increasingly recognised as a crucial element of this process (Chen Hsieh et al., 2017; Zimmerman, 1990). Metacognition, commonly referred to as the capacity to reflect on and regulate one's cognitive processes (Yip, 2019), is vital in cultivating independent and successful language learners (Flavell, 1979; Goh & Hu, 2014).

In language learning, metacognitive strategies, such as self-monitoring, planning, and self-evaluation enable learners to manage their language growth and engage in more intentional and thoughtful

learning (Teng, 2025). Learners who are granted complete autonomy over their learning process are compelled to employ metacognitive strategies to oversee and regulate their learning (Shih & Huang, 2020). This includes making decisions regarding the optimal time, location, and method of engaging with learning materials to ensure favorable learning outcomes (Yilmaz & Baydas, 2017). Despite these benefits, EFL learners often face difficulties applying metacognitive strategies effectively, including poor time management (Zhang & Seepho, 2013) and low metacognitive awareness (Teng, 2022b). Students who use metacognitive strategies are more inclined to figure out the best techniques for planning, monitoring, and evaluating their learning since they are aware of their learning process and approaches (Zhang & Goh, 2006).

The magnitude of metacognitive strategies in language learning has recently attracted a lot of attention from scholars and educators worldwide. Scholars have investigated metacognitive strategies across various themes, particularly in the context of language acquisition, such as writing (Pitenoee et al., 2017; Teng, 2020, 2022b, 2022a), reading (Amini et al., 2020; Marboot et al., 2020; Wallace et al., 2021), listening (Chou, 2017; Maftoon & Fakhri Alamdari, 2020), technology in language learning (Shih & Huang, 2020; Yilmaz & Baydas, 2017), vocabulary (Cabrera-Solano et al., 2019), and others. Taken together, this body of work indicates that metacognitive strategies are consistently associated with improved learning outcomes regardless of the specific skill or context under investigation, though the research has developed largely in parallel across these strands rather than being brought together into a unified account of trends and practices. Despite the increasing interest in metacognitive strategies in the realm of ELT, they have not comprehensively synthesized publication trends, methodological characteristics, research contexts, and pedagogical implications across English language teaching. Without such a synthesis, teachers and curriculum designers are left to rely on isolated, context-specific findings that may not transfer across settings. This will increase the

risk of adopting strategies that are ineffective for their particular learners. Meanwhile, researchers risk repeating investigations that have already been conducted in similar contexts, while genuinely underexplored areas, such as certain language skills, learner populations, or regions, remain neglected. Accordingly, the present study is crucial since the results of the previous studies often differ due to variations in research context, methodology, and the language skills they focus on, resulting in fragmented understandings. Left unaddressed, this fragmentation risks producing a body of research that grows in volume but not in cumulative insight, limiting its practical value for ELT practitioners and its theoretical contribution to the field. In addition, the lack of a comprehensive overview hinders educators and researchers from building on existing knowledge and identifying promising avenues for future research.

Our study addresses this gap by systematically reviewing research on metacognitive strategies in ELT, synthesizing publication trends, methodological characteristics, research contexts, and key findings. In doing so, this review offers evidence-based insights to guide both classroom implementation and future research directions. To guide our study, we sought responses to the following research inquiries:

1. What are the prevailing trends in the implementation of metacognitive strategies in ELT research?
2. What are the major findings regarding the impact of metacognitive strategies on language proficiency in ELT?
3. What challenges affect the implementation and effectiveness of metacognitive strategies in ELT?

METHOD

Our systematic review is conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Liberati, 2009) for transparently reporting the review process. It provides a structured approach for transparently reporting systematic reviews and meta-analyses. By adhering to

PRISMA, we ensured rigor, replicability, and clarity in each stage of the review process. Conducting systematic reviews requires a methodical, sequential process for locating and assessing existing research (Bolan et al., 2017), and PRISMA offers a validated framework for this procedure. In addition, the methodology exhibits a well-structured and comprehensive methodology (Kowalczyk & Truluck, 2013), wherein the search for relevant articles to be examined is conducted systematically, emphasizing the importance of thorough and reproducible research methods across accessible databases.

Search Strategy

We conducted a library metadata search using Publish or Perish (PoP) 8.4.4 software. The search was piloted in the Scopus database to identify relevant studies related to the research objectives. Scopus was selected due to its extensive interdisciplinary reach and its ability to index peer-reviewed works across a range of fields, such as education and linguistics (Shareefa & Moosa, 2020). Furthermore, Scopus stands out among databases due to its significantly higher inclusion rates, reportedly encompassing up to 70% more content than similar academic search engines (López-Illescas et al., 2008). Furthermore, it provides sophisticated filtering options and integrates well with reference management systems, enabling efficient data export and organization.

While we recognize the benefits, we also understand that limiting our search to just one database might have resulted in missing relevant studies found in other sources. This limitation is considered when interpreting the results, and we recommend that future research include multiple databases like Web of Science, ERIC, or Google Scholar to ensure more comprehensive coverage.

The search was conducted using a range of keywords, including ‘metacognitive strategies’, ‘metacognitive regulation’, ‘metacognitive learning strategies’, ‘metacognitive reading strategies’, ‘metacognitive writing strategies’, ‘metacognitive listening strategies’, ‘metacognitive strategy instructions’, ‘metacognitive strategies in

English classrooms', and 'metacognitive strategies in EFL classrooms. These keywords were organized according to PICO (Population, Intervention, Comparison, Outcome) framework. The population was defined as learners in English language/EFL classroom contexts, and the intervention was defined as the use or instruction of metacognitive strategies across specific language skills. In addition, the Comparison and Outcome elements were not applied as search filters, as this review focuses on synthesizing trends and practices rather than comparing intervention effectiveness. All results were saved into a single 'RIS/ Refmanager' file and imported into Zotero, a popular tool for managing and organizing research references. Zotero facilitated management of citations, identification of duplicates, and refinement of metadata, ensuring that records were accurate and consistent before proceeding with further screening and analysis (Puckett, 2017).

Table 1.
PICO analysis for keyword search

PICO elements	Definition in this study	Corresponding search keywords
Population (P)	Learners in English language classes.	"metacognitive strategies in English classrooms," "metacognitive strategies in EFL classrooms"
Intervention (I)	Use or instruction of metacognitive strategies, including skill-specific applications	"metacognitive strategies," "metacognitive regulation," "metacognitive learning strategies," "metacognitive reading strategies," "metacognitive writing strategies," "metacognitive listening strategies," "metacognitive strategy instruction"

Inclusion and Exclusion Criteria

We imported the data from the Zotero application to PICO portal a free online tool which endorses the different phases of a PRISMA-based systematic literature review. Then, we set the inclusion and exclusion criteria (Table 2) for the 200 articles. In this regard, we only included studies conducted between 2010 and 2022 that focused on incorporating metacognitive strategies in English language classrooms. The search was conducted in early 2023; 2022 was set as the upper boundary because publications from 2023 were not yet fully indexed and accessible at the time of data collection, ensuring a complete and consistent dataset for the review period. The starting point of 2010 was selected to capture over a decade of research development in this area, allowing the review to trace how attention to metacognitive strategies in ELT has evolved over time. Also, only studies with empirical data were included in our review. In contrast, theoretical studies were not included in this review. Subsequently, we conducted a quality assessment of the articles using the framework offered by Jesson et al. (2011), which evaluates each study against five criteria: whether the study's goal is well stated, whether the methodology makes sense regarding its intended goals, whether the study procedure is valid and appropriately designed, whether the answers to the research questions are sufficient, and whether the key results are clearly spelled out. Each criterion was rated as Yes (2 points), Partially (1 point), or No (0 points), yielding a maximum score of 10 per article. Only studies scoring at least 5 points were retained for inclusion. The assessment was conducted independently by all authors and subsequently cross-checked to ensure consistency and agreement. Finally, based on the quality assessment stage, our study included 20 research articles (Figure 1). The articles were reread and used in the analysis stage.

Table 2.

Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria

Published between 2010 to 2022. Written in English language. Reporting empirical studies. Peer-reviewed articles.	Theoretical articles. Not written in English. Not peer-reviewed.

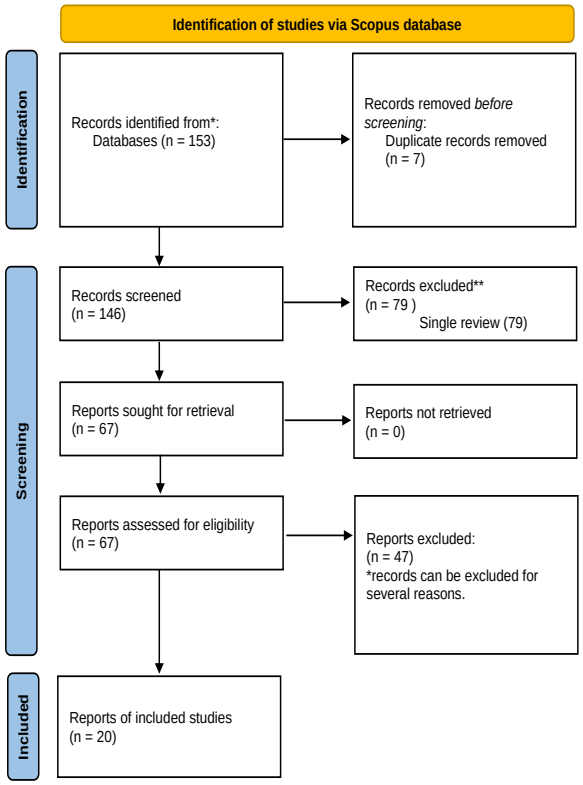


Figure 1. PRISMA diagram

Data Analysis

To maintain uniformity and minimize bias in data extraction and analysis, each researcher independently examined and coded the chosen articles. Interrater reliability was assessed by calculating the percentage of agreement, which indicated over 90% consistency among the reviewers. Any disagreements were settled through discussion, with a third reviewer stepping in if consensus could not be achieved.

The data gathered were then analyzed using the thematic analysis method, a widely utilized approach for textual analytics that facilitates the comparison, contrast, and categorization of the data (Fraenkel et al., 2012). In the first stage, we extracted relevant data from the articles (see Table 2). Microsoft Word was used to construct a form for documenting the results of this stage. Thenceforth, we individually read the full papers, identified keywords, highlighted the phases of extracting the context of the evaluated studies, and consolidated the prior findings according to the emphasis of our systematic review. We later analyzed and deliberated on the collected data. The data analysis was compiled thereafter.

We employed an inductive method for our coding, which allowed themes to naturally arise from the data. Each researcher independently coded the studies using a standardized template in Microsoft Word. The codes were then compared, refined, and organized into broader themes through team discussions. This approach ensured the credibility and reliability of the findings. The final themes and sub-themes served as the foundation for the analytical discussion.

FINDINGS

The following are the primary discoveries of our review on the current trends of metacognitive strategies in ELT research from 2010 to 2022. The major findings concern the impact of metacognitive strategies on language proficiency in ELT contexts.

Prevailing trends in the Use of Metacognitive Strategies within ELT Research from 2010 to 2022

Regarding this inquiry, the findings encompass the examination of several variables, including the distribution of years, countries of the studies, the participants' educational levels, and the research methods employed. Descriptions of each category are provided below.

Trends by years

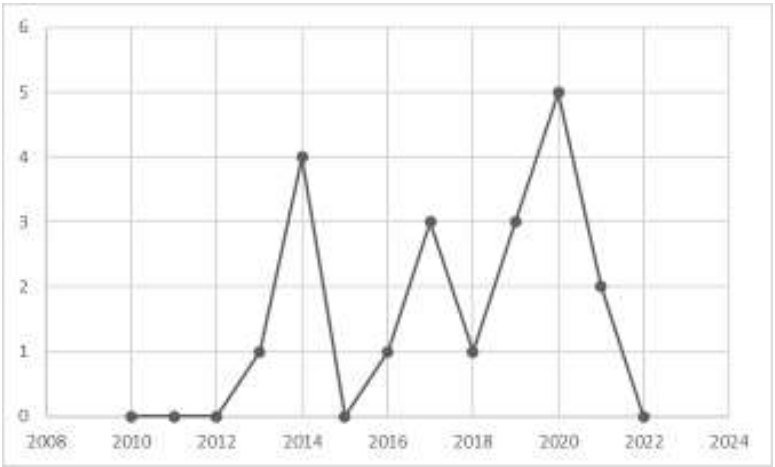


Figure 2. Number of articles by year

Figure 2 provides an overview of the annual number of publications concerning the use of metacognitive strategies in ELT from 2010 to 2022. As seen, there were no documented publications throughout the initial period (2010 – 2012). This indicates that during these years, there was either minimal research activity or no documented or published work in the Scopus database. Afterwards, 2013 (n=1) marked the beginning of the documented research activities. In the following year, 2014, there was a substantial surge in research output. As indicated, there were four publications indexed in the Scopus database. This period is most likely indicative of the early phase of increased research efforts and production. Furthermore, in 2015, there was a decline to zero publications, suggesting a possible disruption or decrease in research endeavors. However, the following years exhibited a rebound with some fluctuations. One publication was recorded in 2016, and a significant increase occurred in 2017 (n=3). Unfortunately, a slight decline was seen in 2018 (n=1). Between 2019 and 2022, research activity exhibited significant variations. In 2019, three publications were recorded, maintaining relatively steady productivity. The peak occurred in 2020 with five publications,

indicating the pinnacle of the research effort. Nevertheless, in 2021, the number of publications decreased to two, and 2022 recorded no publications, suggesting a significant fall. In the Findings section, summarize the collected data and the analysis performed on those data relevant to the issue that is to follow. The Findings should be clear and concise. It should be written objectively and factually, and without expressing personal opinion. It includes numbers, tables, and figures (e.g., charts and graphs).

Countries of Studies

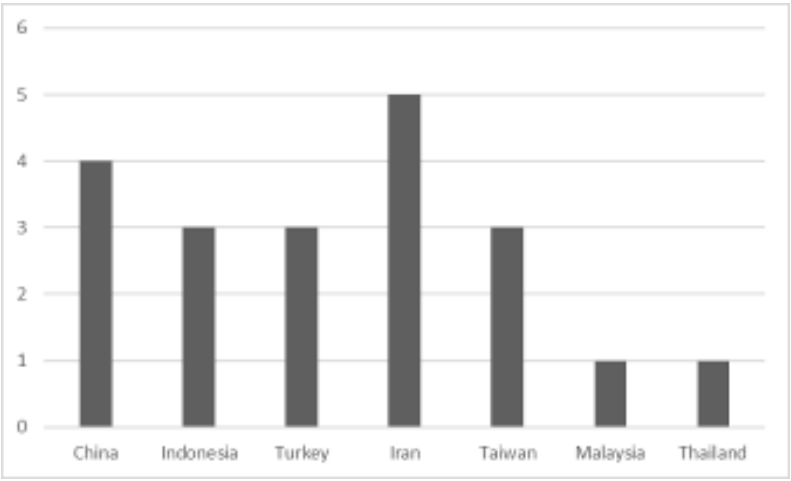


Figure 3. Number of articles by country

Figure 3 shows the distribution of publications across several countries: China (n=4), Indonesia (n=3), Turkey (n=3), Iran (n=5), Taiwan (n=3), Malaysia (n=1), and Thailand (n=1). Iran is the top contributor with the highest number of publications, indicating a strong research output and potentially a more active or prioritized research community. Following Iran, China has made a significant contribution with four publications, showing substantial research activity and output. Furthermore, Indonesia, Turkey, and Taiwan each have 3 publications, demonstrating a comparable level of research activity among these countries. On the other hand, Malaysia and Thailand each have 1 publication, suggesting a lower level of

research output compared to the other countries listed. Overall, the data highlights the variability in research contributions across different countries, with most studies conducted in Asian countries.

Educational Levels

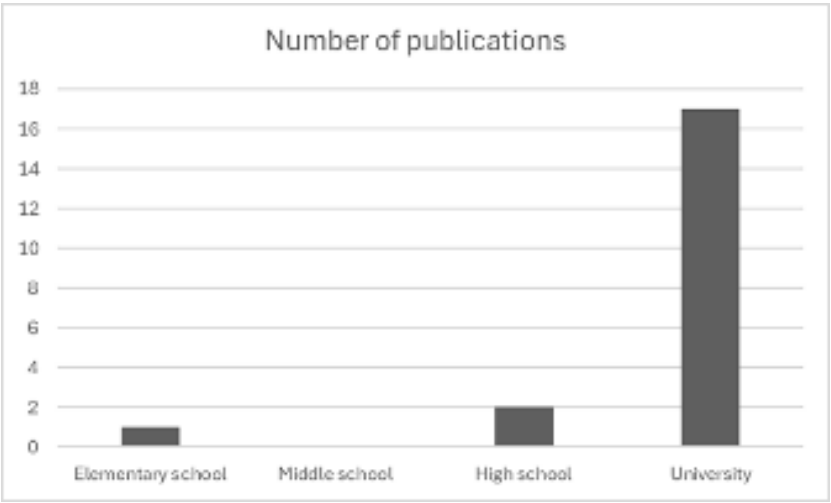


Figure 4. Number of articles by educational level

The data in Figure 4 shows the number of publications for different educational levels: elementary school, middle school, high school, and university. The breakdown is as follows: elementary school (n=1), middle school (n=0), high school (n=2), and university (n=17). These data indicate that the majority of publications concerning the use of metacognitive strategies in ELT are at the university level, with 17 publications. This suggests that most research and scholarly outputs are concentrated at the university level, where higher education institutions and adult learners are typically located. In contrast, there was only one publication associated with elementary school, and no publications were published in middle school contexts. This indicates a lack of research or scholarly activity regarding the issue at these educational stages. The high school level has a minimal presence with only 2 publications, suggesting some, albeit limited, research activity in the realm of metacognitive strategies within the ELT. Overall, the

findings underscore the involvement of university students in participating in the studies exploring the significant role of metacognitive strategies in ELT.

Research Design

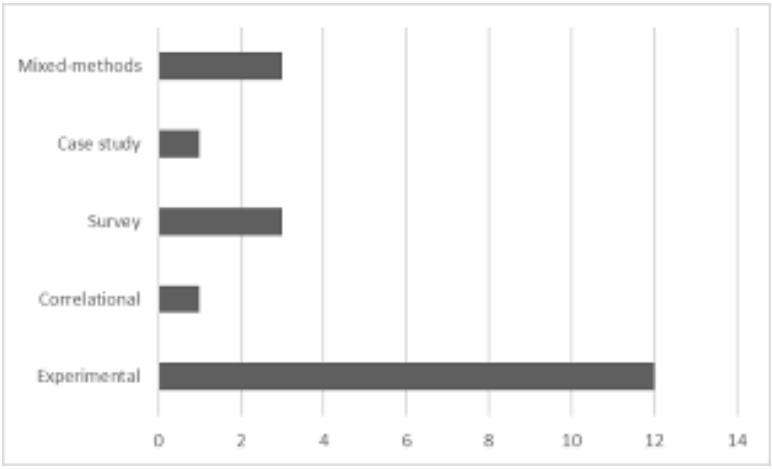


Figure 5. Employed research design

Figure 5 indicates the publications' distribution in the Scopus database based on the employed research design in exploring the use of metacognitive strategies in ELT. As seen, most of the studies employed experimental design (n=12). This indicates that the research community has a strong preference for the use of this research design to explore the impact of metacognitive strategies in ELT. In other words, most of the studies involved controlled conditions to investigate causality and effect relationships. Furthermore, as indicated in Figure 6, mixed-methods (n=3) and survey design (n=3) became the most commonly chosen design to explore the issue of using metacognitive strategies in ELT. On the other hand, correlational (n=1) and case studies (n=1) were least utilized to probe into the issue. In short, the data underscores a clear preference for employing experimental design in exploring the use of metacognitive strategies in ELT.

Major Findings on the Impact of Metacognitive Strategies on Language Proficiency in ELT

The reviewed studies suggest that metacognitive strategies support language proficiency in ELT. Of the 20 articles, 17 examined proficiency outcomes directly reported improvement in the target skill (see Table 3). Reading comprehension received the most attention (n = 9), followed by writing (n = 4) and listening (n = 4).

Table 3.
Impact on language skills and other fields

Language skills	*f*	Articles
Reading	9	(Annury et al., 2019; Dewi & Muzammil, 2020; Mohseni et al., 2020; Muhid et al., 2020; Razı & Çubukçu, 2014; Seedanont & Pookcharoen, 2019; Shang, 2017; Shih & Huang, 2018; Zhang & Seepho, 2013)
Writing	4	(Nosratinia & Adibifar, 2014; Pitenoee et al., 2017; Teng & Zhang, 2020; Teng, 2020)
Listening	4	(Chou, 2017; Harputlu & Ceylan, 2014; Maftoon & Fakhri Alamdari, 2020; Rahimirad & Shams, 2014)

Impact on Reading

Reading was found to be the most researched skills, with nine studies. They fall into three groups according to what they examined. The first group tested the effect of strategy instruction, and these studies reported gains in comprehension. Mohseni et al. (2020) assigned 54 intermediate Iranian EFL learners to a metacognitive training group, a critical thinking awareness group, or a control group. Both experimental groups improved on general reading and argumentative texts and outperformed the control group, while for cause-and-effect texts only the metacognitive group differed significantly from the control group. Razı and Çubukçu (2014) found that a six-week metacognitive reading strategy training program significantly improved the reading comprehension of 93 first-year students, and they linked the gains to learners' declarative, procedural, and conditional knowledge of the strategies. Muhid et al.

(2020) likewise reported that metacognitive strategies improved students' reading achievement, and Seedanont and Pookcharoen (2019) examined the effects of semester-long strategy instruction on students' reading ability. Dewi and Muzammil (2020) taught planning, monitoring, and evaluating explicitly, along with questioning while reading, and students reported positive attitudes and felt they had become better readers.

The second group examined how strategy use relates to comprehension. Zhang and Seepho (2013) found a significant positive correlation between metacognitive strategy use and reading achievement. Shang (2017) showed that guessing content predicted comprehension scores while reading slowly may hinder it, although proficiency level, annotation use, and strategy use were not significantly related. Shih and Huang (2018) found that high and low scorers on a TOEIC reading test used a similar variety of strategies but differed qualitatively in selective attention, self-monitoring, and self-evaluation.

The third group is descriptive. Annury et al. (2019) reported that learners used a wide range of metacognitive strategies to plan, arrange, and evaluate their reading, and that they were aware of their own cognitive processes. These studies indicate that metacognitive strategy instruction improves comprehension, and that how well learners use the strategies matters as much as how often they use them.

Impact on Writing

Four studies reported positive effects of using metacognitive strategies on writing. Nosratinia and Adibifar (2014) compared a group that received metacognitive strategy training with a control group that followed the language school's usual program. The experimental group performed better on the writing post-test, and field-independent learners outperformed field-dependent ones. Pitenoee et al. (2017) found that the intervention helped learners produce better content in their writing, and the metacognitive group outperformed the cognitive group on content. Teng (2020) compared cooperative-metacognitive instruction, metacognitive instruction, and cooperative learning instruction. Writing scores rose in all three

groups, even though learners' initial proficiency was not high and the treatment lasted only 36 hours, and the author concluded that the semester-long cooperative-metacognitive approach was feasible and effective. Teng and Zhang (2020) tested a five-month instruction program based on self-regulated learning (SRL) strategies. The intervention group outperformed the control group on both the post-test and the delayed post-test, although the effect size decreased over time, and these learners also became more active in using SRL strategies, including metacognitive, social behavior, and motivational regulation strategies.

Impact on Listening

Four studies explored the use of metacognitive strategies in listening. Four studies focused on listening (Chou, 2017; Harputlu & Ceylan, 2014; Maftoon & Fakhri Alamdari, 2020; Rahimirad & Shams, 2014). Three of them examined metacognitive strategy instruction and reported gains in listening performance. Chou (2017) found that the experimental group outperformed the control group on a listening test and also showed greater metacognitive awareness of listening strategies. The students saw tasks as an important source of input that helped improve their listening. Rahimirad and Shams (2014) reported a significant improvement in listening performance after instruction, and they noted that monitoring and evaluation strategies helped learners become more independent and self-regulated. Maftoon and Fakhri Alamdari (2020) worked with intermediate EFL learners in Iran and found that guided, process-based instruction supported listening comprehension and raised learners' metacognitive awareness, including across the five factors of the Metacognitive Awareness Listening Questionnaire (MALQ). The fourth study, by Harputlu and Ceylan (2014), took a different approach and examined the relationship between listening proficiency and metacognitive strategy use. It found negative correlations with two MALQ subscales, person knowledge and mental translation. The expected positive relationships with problem solving, directed attention, and planning and evaluation were also not statistically significant.

Challenges in Integrating Metacognitive Strategies in ELT

Despite numerous advantages of integrating metacognitive strategies in the realm of ELT, the process might not be as smooth as expected. In other words, the literature identifies several challenges when applying these strategies in English language teaching and learning (see Table 4).

Table 4.

Challenges when incorporating metacognitive strategies

Challenges	*f*	Sample articles
Time management	1	Zhang and Seepho (2013)
Lack of metacognitive awareness	4	Teng (2022b)
Familiarity with the strategies	1	Zhang and Seepho (2013)

Time Management

One of the primary challenges identified is time management. As reported by Zhang and Seepho (2013), students encountered difficulties in formulating strategies for planning due to excessive time consumption. Students prefer to employ them in situations when there is no time constraint.

Lack of Metacognitive Awareness

An increasingly recurring hurdle, as highlighted by Teng (2022b) and other scholars, is the insufficient level of metacognitive awareness exhibited by both students and teachers. Insufficient knowledge of a subject can impede the successful execution of metacognitive strategies. The difference in metacognitive awareness level can be seen between low-proficiency and high-proficiency students (Pitenoee et al., 2017; Teng, 2022b; Zhang & Seepho, 2013). They acknowledged that students with limited proficiency had insufficient monitoring skills throughout the learning process, a critical factor for attaining success. On the other hand, the skilled students demonstrated a comprehensive comprehension of metacognition and skillfully employed multiple metacognitive strategies to enhance their learning. They had the expertise to determine the appropriate method to use and when to switch to another to improve their knowledge-acquisition process.

Familiarity with Metacognitive Strategies

Another barrier is the level of familiarity with the strategies themselves. Zhang and Seepho (2013) highlight the fact that students may lack familiarity with some metacognitive strategies, which can hinder their ability to adopt and utilize them effectively. In this regard, the students might be unaccustomed to the strategy as they had barely utilized it before reading. Consequently, students demonstrated a tendency to rely on existing tactics. To reduce this lack of familiarity, we think that providing tailored training sessions, workshops, and ongoing support can be done to ensure that all participants are both comfortable and skilled in using the tactics being implemented.

DISCUSSION

This systematic review examined the incorporation of metacognitive strategies as a pedagogical approach in the field of English Language teaching. A total of 20 empirical research papers from the Scopus database were thoroughly reviewed in terms of their prevailing trends and key discoveries related to the implementation of the strategies. Regarding the trends, the analysis demonstrates that there has been a significant increase in the number of articles on the use of metacognitive strategies in ELT since 2013. Such a rise may indicate the early phase of increased research efforts and production of the issue. Although experiencing a massive decrease in 2015, the number of papers indicated a rebound in 2016, followed by a peak in 2020, suggesting an increased popularity. Furthermore, the analyzed data reveal that research outputs vary among different countries in the world, with most of the studies conducted in Asian countries. Among these countries, Iran and China emerge as the top contributors with the highest number of publications. This indicates a substantial research output and a livelier research community.

In addition, the results illustrate that most publications about the incorporation of metacognitive strategies in ELT are at the university level, with 17 publications. This suggests that most

research and scholarly outputs are concentrated at the university level, where higher education institutions and adult learners are typically located. Such a condition may be associated with the fact that metacognitive strategies are a good fit for adult learners. Parallel to this study, as reported in a systematic review by Siregar et al. (2024), metacognitive strategies advocate adult learners' learning process due to their cognitive maturity, background knowledge, and life experiences. Likewise, Chen (2014) acknowledges that incorporating past experiences into the educational processes can enhance their accomplishments. Furthermore, from the institutional viewpoints, this circumstance might be because universities frequently offer more comprehensive research infrastructures, which include access to funding, academic journals, and institutional backing, all of which support scholarly research. On the other hand, sociocultural factors play a role in shaping this emphasis. In numerous areas, especially in developing nations, research efforts are largely concentrated within universities due to the scarcity of resources and research capabilities in elementary and high schools (Yulita & Napitupulu, 2023). Nonetheless, conducting more studies on the use of metacognitive strategies in ELT classes involving participants from different educational levels can offer valuable insights into the topic. Investigating how metacognitive strategies can be applied in primary and secondary schools may offer valuable insights into effectively introducing and fostering these strategies from a young age, thereby improving language learning outcomes throughout the educational system.

Concerning the study designs, the evaluated articles predominantly employ experimental research methods. The growing demand for evidence-based practices and measurable results in ELT research is believed to be the key factor in this dominance. Experimental designs are particularly effective for evaluating the success of instructional interventions, like metacognitive strategy training, as they enable researchers to isolate variables and determine causal links. This trend highlights the field's ongoing focus on

quantifiable improvements in language proficiency and learning outcomes, in line with global educational policies that emphasize accountability and performance metrics. While experimental research provides important insights into the effectiveness of metacognitive strategies, its dominance might also indicate a lack of understanding regarding the mechanisms and reasons behind these results. Our findings indicate the necessity of investigating the issue through the lens of qualitative studies. Qualitative methods can reveal contextual, emotional, and cognitive aspects that quantitative approaches might miss, such as learner independence, motivation, and classroom interactions (Dörnyei & Griffee, 2010; Yin, 2009). Thus, adopting a more balanced methodological approach—combining quantitative precision with qualitative depth—would lead to a more comprehensive and holistic understanding of the use of metacognitive strategies in ELT settings.

Regarding the second inquiry, this review exposed various impacts of applying metacognitive strategies in English language skills and other areas related to language teaching and learning. The most reported language skill is reading, which can be associated with the essence of metacognitive strategies, which allow students to monitor and reflect on their reading process, leading to better reading comprehension (Cohen, 2014; Shih & Huang, 2018). Thus, the beneficial outcomes of metacognitive strategies in reading are undeniable. Moreover, the use of metacognitive strategies within other pedagogical approaches is beneficial. For instance, as reported by Maftoon and Alamdari (2020), when integrated with the process-based approach, metacognitive strategies can lead to the enhancement of learners' listening skills. In this regard, metacognitive strategies assist learners in cultivating a deeper understanding of the various elements that contribute to their individual learning processes, allowing them to acquire skills from their instructors and peers to effectively guide and manage these processes independently (Goh, 2008).

Nevertheless, the incorporation of metacognitive strategies in ELT is not without complications. Regarding the third inquiry, the examined studies reported some challenges, including time management, lack of familiarity with metacognitive strategies, and lack of metacognitive awareness. Regarding time management, the findings emphasize the importance of efficient planning and time allocation to ensure the successful integration of metacognitive strategies. In line with this, Zhang and Seepho (2013) discuss the need for teachers to find a balance through which they cover the required content and allocate ample time to foster students' metacognitive skills.

Furthermore, students' lack of familiarity with metacognitive strategies might be attributed to their limited prior experience of utilizing the strategies. Consequently, students demonstrated a tendency to rely on their conventional learning tactics (Zhang & Seepho, 2013). To address this challenge, tailored training sessions, workshops, and continuous assistance can be provided to ensure that all participants are both comfortable and skilled in using the strategies being implemented. Finally, students' lack of metacognitive awareness could be attributed to the restricted cognitive awareness of less skilled students in efficiently employing methods and their insufficient linguistic comprehension.

The results of this comprehensive analysis emphasize the crucial significance of integrating metacognitive strategies into ELT. Despite the mentioned difficulties, such as efficient time allocation and limited knowledge and consciousness, the advantages of employing these tactics are significant. Not only do they improve specific language abilities such as reading comprehension and listening, but they also enable learners to have more control over their learning processes. This empowerment is especially vital for adult learners who possess a plethora of prior information and life experiences that they bring to their educational endeavors. By providing focused instruction and support, we may effectively tackle the obstacles that have been identified. This will enhance the

effectiveness of metacognitive methods, resulting in more significant and long-lasting educational achievements. The growing research interest and global variety in studies indicate a rising acknowledgement of the importance of metacognitive strategies in English Language Teaching (ELT). This suggests that further investigation and application of these strategies can greatly contribute to the progress of the field and the enhancement of more efficient teaching methods.

Pedagogical Recommendation

The results of the systematic research on the integration of metacognitive strategies in ELT uncover important pedagogical implications that might assist instructors in improving the efficacy of their methods of instruction. Metacognitive strategies, such as planning, monitoring, and evaluating one's own learning process, enable learners to evolve into more self-reliant and self-governing in their language acquisition. One specific procedure is the direct instruction of metacognitive strategies, especially in writing classes. Educators should demonstrate how to establish writing objectives (planning), promote the use of checklists and self-questioning during the drafting process (monitoring), and apply self-assessment rubrics (evaluating). For example, think-aloud protocols can illustrate how proficient writers plan and revise their work (Anderson, 2002). This type of metacognitive support enhances deeper awareness and self-regulation, particularly for learners at intermediate and advanced levels.

In addition, structured guidance is essential for learners with lower proficiency. Educators might begin by presenting strategy cards that detail specific planning steps or reflective prompts in straightforward language. Visual aids and sentence frames can also assist these learners in gradually adopting strategy use (Goh, 2008). Engaging in group discussions or peer reviews, guided by metacognitive questions such as “What was challenging about this

task?" or "How did you address the problem?" can further enhance learners' awareness of strategies.

Moreover, the review highlights the capacity of multimedia technology to facilitate the use of metacognitive strategies in the English language classroom, in both hybrid and online environments. Instructors should utilize technology-enhanced settings to allow learners to actively participate in self-monitoring, self-examination and other metacognitive processes, ultimately improving their overall language skills performance. Platforms such as Google Docs (for collaborative planning and feedback), Edpuzzle (for reflective listening and viewing), and Padlet or Jamboard (for visually tracking learning progress) offer dynamic environments for learners to practice and reflect on their strategies. Learning management systems like Moodle and Canvas can also incorporate metacognitive prompts and self-assessment quizzes after each module, prompting learners to continuously assess their understanding and learning methods.

In summary, the systematic study underscores the essential importance of metacognitive strategies in the field of English Language Teaching, highlighting the necessity for instructors to deliberately integrate these tactics into their teaching methods. Moreover, the use of digital media can enhance the utilization of metacognitive strategies, eventually resulting in enhanced learning outcomes for language learners.

CONCLUSION

This systematic review examined 20 empirical studies on the incorporation of metacognitive strategies in ELT, published between 2010 and 2022. The findings revealed that research interest in this area grew from 2014 onward, peaking in 2020, with studies concentrated in Asian countries and predominantly involving undergraduate learners. Experimental designs were the most commonly employed method, and reading comprehension emerged as the most frequently researched language skill. The review also identified persistent challenges in the implementation of metacognitive strategies,

including time management, limited learner knowledge of these strategies, and a lack of metacognitive awareness.

This study is significant owing to the scarcity of review studies on the adoption of metacognitive strategies in ELT. Furthermore, this study is expected to serve as a valuable guide for future researchers interested in conducting studies into the incorporation of metacognitive strategies in English classrooms. Based on the findings of the study, several recommendations are given. Firstly, it is crucial to conduct studies concerning the incorporation of metacognitive strategies in ELT by involving participants from different educational levels and employing more qualitative methodologies to obtain more valuable insights into the topic. Secondly, it is essential to offer students chances to cultivate metacognitive awareness and skills, through specific instructions and practice within the ELT curriculum. Thirdly, for teachers, training in understanding the significance of metacognitive strategies will be fruitful to assist them in establishing a conducive learning environment.

Despite the invaluable findings, this study has certain constraints. Some publications do not explicitly contain the necessary information that researchers require, such as the challenges encountered. This probably restricts the thoroughness of the analysis. Furthermore, the selected articles were only identified based on the terms included in the titles and authorships. This may have led to the omission of pertinent research that did not explicitly utilize the keywords provided. The cited constraints indicate the necessity for further comprehensive research on the subject to enhance our understanding of metacognitive strategies in ELT.

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REFERENCES

Amini, D., Anhari, M. H., & Ghasemzadeh, A. (2020). Modelling the relationship between metacognitive strategy awareness, self-regulation and reading proficiency of Iranian EFL learners. *Cogent Education*, *7*(1). https://doi.org/10.1080/2331186X.2020.1787018

Anderson, N. J. (2002). The role of metacognition in second language teaching and learning. *ERIC Digest*.

Annury, M. N., Mujiyanto, J., Saleh, M., & Sutopo, D. (2019). The use of metacognitive strategies in EFL reading comprehension. *Proceedings of the First International Conference on Administration Science (ICAS 2019)*. https://doi.org/10.2991/icas-19.2019.13

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. https://doi.org/10.1007/s10639-021-10518-y

Bolan, A., Cherry, G., & Dickson, R. (2017). *Doing a systematic review: a student's guide* (2nd ed.). SAGE Publications.

Cabrera-Solano, P., Gonzalez-Torres, P., Solano, L., & Castillo-Cuesta, L. (2019). Using visual vocabulary app as a metacognitive strategy in EFL Learning: A case of pre-service teachers. *International Journal of Learning, Teaching and Educational Research*, *18*(12), 302–315. https://doi.org/10.26803/ijlter.18.12.17

Chen Hsieh, J. S., Wu, W.-C. V., & Marek, M. W. (2017). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning*, *30*(1–2), 1–21. https://doi.org/10.1080/09588221.2015.1111910

Chen, J. C. (2014). Teaching nontraditional adult students: Adult learning theories in practice. *Teaching in Higher Education*, *19*(4), 406–418. https://doi.org/10.1080/13562517.2013.860101

Chou, M.-H. (2017). A task-based language teaching approach to developing metacognitive strategies for listening comprehension. *International Journal of Listening*, *31*(1), 51–70. https://doi.org/10.1080/10904018.2015.1098542

Cohen, A. D. (2014). Strategies in learning and using a second language. In *Longman Applied Linguistics* (Second edition). Routledge, Taylor & Francis Group.

Dewi, S. L., & Muzammil, L. (2020). Students' attitudes to metacognitive strategies for learning how to read. *International Journal of Language Studies*, *14*(4), 51–62.

Divrik, R., Pilten, P., & Mentiş Taş, A. (2021). Effect of inquiry-based learning method supported by metacognitive strategies on fourth-grade students' problem-solving and problem-posing skills: A mixed methods research. *International Electronic Journal of Elementary Education*, *13*(2), 287–308. https://doi.org/10.26822/iejee.2021.191

Dörnyei, Z., & Griffee, D. T. (2010). Research methods in applied linguistics. *TESOL Journal*, *1*(1), 181–183. https://doi.org/10.5054/tj.2010.215611

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. *American Psychologist*, *34*(10), 906–911. https://doi.org/10.1037/0003-066X.34.10.906

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). McGraw-Hill Humanities/Social Sciences/Languages.

Goh, C. (2008). Metacognitive instruction for second language listening development. *RELC Journal*, *39*(2), 188–213. https://doi.org/10.1177/0033688208092184

Goh, C. C. M., & Hu, G. (2014). Exploring the relationship between metacognitive awareness and listening performance with questionnaire data. *Language Awareness*, *23*(3), 255–274. https://doi.org/10.1080/09658416.2013.769558

Harputlu, L., & Ceylan, E. (2014). The effects of motivation and metacognitive strategy use on EFL listening proficiency. *Procedia - Social and Behavioral Sciences*, *158*, 124–131. https://doi.org/10.1016/j.sbspro.2014.12.056

Jesson, J., Matheson, L., & Lacey, F. M. (2011). *Doing your literature review: traditional and systematic techniques*. SAGE.

Kowalczyk, N., & Truluck, C. (2013). Literature reviews and systematic reviews: What is the difference? *Radiologic Technology*, *85*(2), 219–222.

Liberati, A. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *Annals of Internal Medicine*, *151*(4), W. https://doi.org/10.7326/0003-4819-151-4-200908180-00136

López-Illescas, C., de Moya-Anegón, F., & Moed, H. F. (2008). Coverage and citation impact of oncological journals in the Web of Science and Scopus. *Journal of Informetrics*, *2*(4), 304–316. https://doi.org/10.1016/j.joi.2008.08.001

Maftoon, P., & Fakhri Alamdari, E. (2020). Exploring the effect of metacognitive strategy instruction on metacognitive awareness and listening performance through a process-based approach. *International Journal of Listening*, *34*(1), 1–20. https://doi.org/10.1080/10904018.2016.1250632

Marboot, K., Roohani, A., & Mirzaei, A. (2020). Investigating Iranian EFL students' metacognitive online reading strategies, critical thinking, and their relationship: A mixed-methods study. *Issues in Language Teaching*, *9*(1).

Mohseni, F., Seifoori, Z., & Ahangari, S. (2020). The impact of metacognitive strategy training and critical thinking awareness-raising on reading comprehension. *Cogent Education*, *7*(1). https://doi.org/10.1080/2331186X.2020.1720946

Muhid, A., Amalia, E. R., Hilaliyah, H., Budiana, N., & Wajdi, M. B. N. (2020). The effect of metacognitive strategies implementation on students' reading comprehension achievement. *International Journal of Instruction*, *13*(2), 847–862. https://doi.org/10.29333/iji.2020.13257a

Nosratinia, M., & Adibifar, S. (2014). The effect of teaching metacognitive strategies on field-dependent and independent learners' writing. *Procedia - Social and Behavioral Sciences*, *98*, 1390–1399. https://doi.org/10.1016/j.sbspro.2014.03.557

Pitenoee, M. R., Modaberi, A., & Ardestani, E. M. (2017). The effect of cognitive and metacognitive writing strategies on content of the Iranian intermediate EFL learners' writing. *Journal of Language Teaching and Research*, *8*(3), 594. https://doi.org/10.17507/jltr.0803.19

Puckett, J. (2017). *Zotero: A guide for librarians, researchers, and educators* (2nd ed.). Association of College and Research Libraries.

Rahimirad, M., & Shams, M. R. (2014). The effect of activating metacognitive strategies on the listening performance and metacognitive awareness of EFL students. *International Journal of Listening*, *28*(3), 162–176. https://doi.org/10.1080/10904018.2014.902315

Razı, S., & Çubukçu, F. (2014). Metacognition and reading: Investigating intervention and comprehension of EFL freshmen in Turkey. *Procedia - Social and Behavioral Sciences*, *158*, 288–295. https://doi.org/10.1016/j.sbspro.2014.12.090

Seedanont, C., & Pookcharoen, S. (2019). Fostering metacognitive reading strategies in Thai EFL classrooms: A focus on proficiency. *English Language Teaching*, *12*(7), 75. https://doi.org/10.5539/elt.v12n7p75

Shang, H.-F. (2017). Exploring metacognitive strategies and hypermedia annotations on foreign language reading. *Interactive Learning Environments*, *25*(5), 610–623. https://doi.org/10.1080/10494820.2016.1171787

Shareefa, M., & Moosa, V. (2020). The most-cited educational research publications on differentiated instruction: A bibliometric analysis. *European Journal of Educational Research*, *9*(1), 331–349. https://doi.org/10.12973/eu-jer.9.1.331

Shih, H. J., & Huang, S. C. (2020). College students' metacognitive strategy use in an EFL flipped classroom. *Computer Assisted Language Learning*, *33*(7), 755–784. https://doi.org/10.1080/09588221.2019.1590420

Shih, H.-C. J., & Huang, S. C. (2018). EFL learners' metacognitive strategy uses in reading tests. *English Teaching & Learning*, *42*(2), 117–130. https://doi.org/10.1007/s42321-018-0007-3

Siregar, R. A., Lengkanawati, N. S., & Damayanti, I. L. (2024). Metacognitive strategies in mediating EFL adult learners' self-regulated language learning: A systematic review. *LLT Journal: A Journal on Language and Language Teaching*, *27*(1), 252–272. https://doi.org/10.24071/llt.v27i1.5502

Teng, L. S., & Zhang, L. J. (2020). Empowering learners in the second/foreign language classroom: Can self-regulated learning strategies-based writing instruction make a difference? *Journal of Second Language Writing*, *48*, 100701. https://doi.org/10.1016/j.jslw.2019.100701

Teng, M. F. (2020). Tertiary-level students' English writing performance and metacognitive awareness: A group metacognitive support perspective. *Scandinavian Journal of Educational Research*, *64*(4), 551–568. https://doi.org/10.1080/00313831.2019.1595712

Teng, M. F. (2022a). Effects of cooperative–metacognitive instruction on EFL learners' writing and metacognitive awareness. *Asia Pacific Journal of Education*, *42*(2), 179–195. https://doi.org/10.1080/02188791.2020.1835606

Teng, M. F. (2022b). Effects of individual and group metacognitive prompts on tertiary-level students' metacognitive awareness and writing outcomes. *The Asia-Pacific Education Researcher*, *31*(5), 601–612. https://doi.org/10.1007/s40299-021-00611-8

Teng, M. F. (2025). *Metacognition in Language Teaching*. Cambridge University Press. https://doi.org/10.1017/9781009581295

Wallace, M. P., Li, V. M., Huang, T. C., & He, N. C. (2021). Metacognitive strategy use for EFL readers: Differences in gender and reading ability. *Teaching English as a Second Language Electronic Journal*, *25*(2), 1–22.

Yilmaz, R. M., & Baydas, O. (2017). An examination of undergraduates' metacognitive strategies in pre-class asynchronous activity in a flipped classroom. *Educational Technology Research and Development*, *65*(6), 1547–1567. https://doi.org/10.1007/s11423-017-9534-1

Yin, R. K. (2009). *Case study research: design and methods* (4th ed.). Sage Publications.

Yip, M. C. W. (2019). *Cognition, metacognition and academic performance: An East Asian perspective*. Routledge.

Yulita, D., & Napitupulu, M. (2023). metacognitive reading strategies in EFL context: A systematic literature review. *Indonesian Educational Research Journal*, *1*(1), 18–25.

Zhang, D., & Goh, C. C. M. (2006). Strategy knowledge and perceived strategy use: Singaporean students' awareness of listening and speaking strategies. *Language Awareness*, *15*(3), 199–119. https://doi.org/10.2167/la342.0

Zhang, L., & Seepho, S. (2013). Metacognitive strategy use and academic reading achievement: Insights from a Chinese context. In *Electronic Journal of Foreign Language Teaching* (Vol. 10, Issue 1). http://e-flt.nus.edu.sg/

Zimmerman, B. J. (1990). Self-regulating academic learning and achievement: The emergence of a social cognitive perspective. *Educational Psychology Review*, *2*(2), 173–201. https://doi.org/10.1007/BF01322178