

Enhancing Reading Skills: SQ3R Method for Reading Comprehension

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ABSTRACT. Reading comprehension is a fundamental skill in English as a Foreign Language (EFL) learning because it enables students to understand, interpret, and critically evaluate academic texts. Despite its importance, many EFL learners still struggle to comprehend academic materials because they use few effective reading strategies. This study synthesizes empirical evidence on the effectiveness of the Survey, Question, Read, Recite, and Review (SQ3R) method in improving students' reading comprehension. A Systematic Literature Review (SLR) following the PRISMA 2020 guidelines analyzed 20 empirical studies published between 2020 and 2025 using predefined inclusion and exclusion criteria. The findings consistently indicate that SQ3R enhances students' reading comprehension by improving their ability to identify main ideas, understand supporting details, retain textual information, and engage actively in the reading process. The reviewed studies also report positive effects on students' motivation, classroom engagement, critical reading, and self-regulated learning. Furthermore, the review reveals that existing research is predominantly conducted in Indonesian EFL contexts and mainly employs quasi-experimental designs, indicating limited geographical and methodological diversity. This study contributes to the literature by synthesizing recent research trends, methodological characteristics, educational impacts, and remaining research gaps related to SQ3R implementation. Future research should examine SQ3R's effectiveness across more diverse educational contexts, learner populations, and instructional settings to strengthen the generalizability of existing evidence.

Keywords: *SQ3R; Reading Comprehension; EFL Learners; Active Reading Strategy; Systematic Literature Review.*

ABSTRAK. Membaca pemahaman merupakan keterampilan fundamental dalam pembelajaran bahasa Inggris sebagai bahasa asing (*English as a Foreign Language/EFL*) karena memungkinkan mahasiswa memahami, menafsirkan, dan mengevaluasi teks akademik secara kritis. Meskipun memiliki peran yang sangat penting, banyak pembelajar EFL masih mengalami kesulitan memahami bahan bacaan akademik akibat terbatasnya penggunaan strategi membaca yang efektif. Penelitian ini bertujuan untuk mensintesis bukti empiris mengenai efektivitas metode *Survey, Question, Read, Recite, and Review* (SQ3R) dalam meningkatkan kemampuan membaca pemahaman mahasiswa. Penelitian ini menggunakan *Systematic Literature Review* (SLR) yang mengacu pada pedoman PRISMA 2020 dengan menganalisis 20 artikel empiris yang diterbitkan pada periode 2020–2025 berdasarkan kriteria inklusi dan eksklusi yang telah ditetapkan. Hasil kajian menunjukkan bahwa metode SQ3R secara konsisten mampu meningkatkan kemampuan membaca pemahaman mahasiswa melalui peningkatan kemampuan mengidentifikasi gagasan utama, memahami informasi pendukung, mempertahankan informasi dari bacaan, serta mendorong keterlibatan aktif dalam proses membaca. Selain meningkatkan aspek kognitif, penelitian-penelitian yang ditinjau juga menunjukkan dampak positif terhadap motivasi belajar, keterlibatan di kelas, kemampuan membaca kritis, serta regulasi diri dalam belajar. Kajian ini juga mengungkap bahwa penelitian tentang SQ3R masih didominasi oleh konteks EFL di Indonesia dan sebagian besar menggunakan desain kuasi-eksperimen, sehingga menunjukkan bahwa keragaman geografis dan metodologis masih terbatas. Oleh karena itu, penelitian selanjutnya disarankan untuk menguji efektivitas SQ3R dalam konteks pendidikan, karakteristik pembelajar, dan lingkungan pembelajaran yang lebih beragam guna memperkuat generalisasi temuan yang telah diperoleh.

Kata kunci: *Metode SQ3R, Membaca Pemahaman, Pembelajar EFL, Pendidikan Tinggi, Tinjauan Pustaka Sistematis*

INTRODUCTION

Reading comprehension is one of the most essential skills in language learning, as it enables students to understand, interpret, and critically evaluate written texts. (Duke et al., 2021; Grabe & Stoller, 2020). It plays a crucial role in academic success, particularly in higher education, where students are expected to comprehend a wide range of academic materials, including textbooks, journal articles, and other scholarly resources written in English (Duke & Cartwright, 2021; Nation & Macalister, 2020). Reading comprehension extends beyond recognizing words and sentences. It requires readers to identify main ideas, connect information across texts, draw inferences, integrate prior knowledge, monitor their understanding, and evaluate an author's message to construct a meaningful interpretation (Duke & Cartwright, 2021; Grabe & Stoller, 2020). Research on reading has consistently demonstrated that successful readers differ from less successful readers not only in linguistic knowledge but also in their ability to regulate cognitive and metacognitive processes during reading. Skilled readers actively plan, monitor, and evaluate their comprehension while strategically selecting appropriate reading techniques to achieve learning goals. Consequently, developing students' reading comprehension has become a primary objective of English language instruction, particularly in English as a Foreign Language (EFL) contexts, where learners often face linguistic and cognitive challenges when reading academic texts (Ali et al., 2022). Therefore, teachers need to employ instructional strategies that actively engage students in the reading process while fostering strategic and independent learning.

Among various reading strategies, the Survey, Question, Read, Recite, and Review (SQ3R) method has received considerable attention because it systematically guides learners through a sequence of metacognitive activities before, during, and after reading (Kusumayanthi & Maulidi, 2019). Rather than functioning solely as a procedural reading technique, SQ3R reflects the principles of metacognitive learning by encouraging learners to activate prior knowledge, formulate questions, monitor comprehension, summarize important information, and evaluate their understanding throughout the reading process. These activities correspond closely with the core components of metacognitive regulation, namely planning, monitoring, and evaluating, which have consistently been associated with successful reading comprehension (Baker & Beall, 2009). In addition, schema theory suggests that readers construct meaning by integrating textual information with their existing knowledge structures, making the activation of prior knowledge an essential prerequisite for comprehension (McVee et al., 2005). Likewise, from a self-regulated learning perspective, effective readers set learning goals, use appropriate strategies, monitor their progress, and evaluate learning outcomes as part of a continuous learning cycle. These theoretical perspectives provide a strong conceptual foundation for understanding why the SQ3R method can improve students' reading comprehension, particularly in EFL learning environments where learners are expected to become increasingly independent readers.

Recent empirical studies have consistently demonstrated the positive impact of the SQ3R method on students' reading comprehension. Several studies reported that SQ3R effectively improved students' understanding of reading texts through systematic learning stages, promoted active engagement during reading activities, and enhanced students' ability to identify main ideas and important information (Anggraini, 2024; Silfani et al., 2024b; Sofyan & Basyarewan, 2025). Similar findings have also been reported in higher education contexts, where implementing SQ3R improved students' academic reading performance and facilitated better comprehension of scholarly texts. Wahyuningsih et al. (2025) also found that SQ3R improved students' ability to understand scientific articles. Other studies have shown that SQ3R not only improves reading achievement but also increases students' motivation, classroom participation, critical reading ability, and information retention because learners become more actively involved in questioning, summarizing, and reviewing textual information. Collectively, these findings indicate that SQ3R is

an effective instructional strategy across various educational contexts. Nevertheless, the reported effectiveness appears to be influenced by differences in educational settings, participant characteristics, instructional procedures, text genres, and research designs, suggesting that the existing evidence requires more comprehensive synthesis.

Despite the growing body of empirical research, several important gaps remain. First, previous studies have primarily examined the effectiveness of SQ3R within specific educational contexts, making it difficult to determine whether its effectiveness is consistent across different educational levels and EFL settings. Second, research methodologies vary considerably, including participant characteristics, instructional duration, learning materials, and outcome measures, yet these methodological differences have rarely been systematically synthesized. Third, although most studies conclude that SQ3R improves reading comprehension, relatively few explicitly explain its effectiveness through the lenses of metacognitive regulation, schema activation, and self-regulated learning, limiting a more comprehensive theoretical understanding of the method. Finally, although studies on SQ3R have increased considerably in recent years, no recent literature review has comprehensively synthesized research trends, methodological characteristics, educational impacts, theoretical foundations, and remaining research gaps based on studies published between 2020 and 2025. Consequently, existing knowledge remains fragmented, highlighting the need for a systematic synthesis that provides a more comprehensive understanding of how the SQ3R method improves students' reading comprehension in EFL contexts.

To address these gaps, this literature review synthesizes empirical evidence on the implementation of the SQ3R method published between 2020 and 2025. Specifically, this study identifies research trends, examines methodological characteristics, evaluates the effectiveness of the SQ3R method in improving students' reading comprehension across different educational contexts, and identifies existing research gaps that may inform future investigations. This review analyzes twenty empirical studies conducted across various EFL settings involving different educational levels, participant characteristics, and research designs. The following research questions guide the review: (1) What are the research trends and methodological characteristics of studies on the implementation of the SQ3R method? (2) How effective is the SQ3R method in improving students' reading comprehension across different educational contexts? (3) What research gaps and future directions can be identified from previous studies on the implementation of the SQ3R method? This study contributes to the existing literature by providing an up-to-date synthesis of recent empirical evidence, integrating findings across diverse educational contexts, identifying methodological and theoretical trends, and highlighting unresolved issues that warrant further investigation. Accordingly, this review not only enriches the theoretical understanding of SQ3R as a metacognitive reading strategy but also offers evidence-based recommendations for English language teachers, curriculum developers, and researchers seeking to strengthen reading instruction and students' reading comprehension in EFL contexts.

METHOD

This study used a Systematic Literature Review (SLR) to synthesize empirical evidence on implementing the Survey, Question, Read, Recite, and Review (SQ3R) strategy to improve students' reading comprehension. A systematic literature review enables researchers to identify, evaluate, and synthesize findings from multiple empirical studies through a transparent, rigorous, and replicable process, providing a comprehensive understanding of a particular research topic (Snyder, 2019; Xiao & Watson, 2019). To enhance methodological transparency and reporting quality, this review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020), which provides standardized guidance for study identification, screening, eligibility assessment, and inclusion (Page et al., 2021). In addition, the review followed the systematic review framework proposed by Okoli (2015), including formulating the review question, conducting a systematic literature search, selecting eligible studies, appraising study

quality, extracting relevant data, and synthesizing evidence. The review was guided by the following research question: How effective is the SQ3R strategy in improving students' reading comprehension across different educational contexts?

We conducted a comprehensive literature search between January and March 2026 using three academic databases: Google Scholar, ERIC, and ResearchGate. We selected these databases because they provide broad coverage of educational and language-learning research and include numerous empirical studies on English language teaching and reading instruction. Before searching, we established a review protocol to ensure consistency throughout the review process. The search strategy combined keywords related to the intervention and research context using Boolean operators (AND and OR). The primary search terms included SQ3R, Survey Question Read Recite Review, reading comprehension, reading instruction, EFL, and ESL. The Boolean operator OR combined synonymous keywords, whereas AND linked the intervention with the research context. The principal search string was formulated as ("SQ3R" OR "Survey Question Read Recite Review") AND ("reading comprehension" OR "reading instruction") AND ("EFL" OR "ESL"). To improve the relevance of the retrieved literature, the search was limited to English-language empirical journal articles published between 2020 and 2025 and available in full text. Conference papers, review articles, book chapters, duplicate records, and studies unrelated to the implementation of SQ3R in reading comprehension were excluded.

The eligibility criteria were established before the review commenced to minimize selection bias and ensure transparency throughout the selection process. (Page et al., 2021; Xiao & Watson, 2019). Studies were included if they (1) were published between 2020 and 2025, (2) were written in English, (3) were published as empirical journal articles, (4) investigated the implementation of the SQ3R strategy in reading comprehension or reading instruction, (5) were conducted in EFL, ESL, or higher education contexts, and (6) provided sufficient methodological information for analysis. The study selection process followed the four stages recommended in the PRISMA 2020 framework, namely identification, screening, eligibility, and inclusion. During the identification stage, we retrieved ten studies from Google Scholar and ten from ResearchGate, and no additional studies from ERIC met the predetermined inclusion criteria. After removing duplicates, we screened the remaining articles by title and abstract, followed by a full-text eligibility assessment. Ultimately, 20 empirical studies fulfilled all selection criteria and were included in the final review. The PRISMA 2020 flow diagram presents the complete selection process.

To ensure the credibility and trustworthiness of the synthesized evidence, we appraised all selected studies before including them in the final analysis. Following recommendations for systematic literature reviews (Okoli, 2015; Snyder, 2019), the appraisal considered the clarity of the research objectives, the appropriateness of the research design, the adequacy of participant descriptions, the transparency of data collection and analysis procedures, the suitability of research instruments, and the relevance of the findings to the review question. We retained only studies that met these methodological quality criteria. We then extracted data from each study using a structured data extraction form that included the authors, publication year, country, educational level, participants, research design, research instruments, implementation procedures of the SQ3R strategy, and the principal findings related to reading comprehension. The extracted information was systematically organized into a Systematic Literature Review Matrix to facilitate comparison and classification across studies.

The extracted findings were synthesized using a narrative synthesis approach because the selected studies employed diverse research designs, participant characteristics, and educational contexts. Narrative synthesis enables researchers to integrate evidence from heterogeneous studies by identifying recurring themes, methodological patterns, similarities, differences, educational impacts, and remaining research gaps (Carroll et al., 2009). In this review, the extracted evidence was first organized into comparable categories and subsequently interpreted to identify research trends, methodological characteristics, the effectiveness of SQ3R across different educational

contexts, and directions for future research. Overall, the adoption of a predefined search protocol, explicit eligibility criteria, systematic quality appraisal, structured data extraction, narrative synthesis, and the PRISMA 2020 reporting framework enhanced the transparency, credibility, and reproducibility of the review process, thereby providing a robust evidence base for understanding the implementation of the SQ3R strategy in EFL reading instruction (Page et al., 2021).

RESULT AND DISCUSSION

Result

The Improvement of Students' Reading Comprehension Through the SQ3R Method

To answer the first research question, the reviewed studies consistently indicate that implementing the SQ3R method improves students' reading comprehension skills. Quantitative evidence from the included studies demonstrates substantial gains in students' reading performance following SQ3R instruction. For example, the mean score increased from 40.00 on the pre-test to 82.77 on the post-test, an improvement of 42.77 points. Similarly, (Winanti & Kartikawati, 2025) found that students' mean scores increased from 59.13 to 87.17, reflecting a gain of 28.04 points. Likewise (Romadhon et al., 2021) reported an improvement from 11.33 to 16.85, corresponding to a gain of 5.52 points. Although improvement varied across studies because of differences in participants, educational settings, and assessment scales, all studies consistently showed positive learning outcomes after implementing the SQ3R method.

These quantitative findings are reinforced by qualitative evidence showing that students became more active, strategic, and confident readers throughout the learning process. The structured stages of SQ3R encourage learners to activate prior knowledge during the Survey stage, generate purposeful questions before reading, identify key ideas while reading, monitor understanding during the Recite stage, and consolidate learning during the Review stage. This systematic process promotes active engagement and metacognitive regulation, helping students construct meaning more effectively and retain information longer.

Overall, the evidence from the 20 reviewed studies demonstrates that SQ3R consistently enhances reading comprehension across diverse educational contexts. The convergence of quantitative improvements and qualitative findings suggests that SQ3R's effectiveness lies not only in improving students' test performance but also in fostering active reading behaviors and deeper cognitive processing, making it a valuable instructional strategy for reading comprehension.

The Effectiveness of SQ3R in Helping Students Identify Main Ideas and Important Details

To answer the second research question, evidence from the reviewed articles shows that the SQ3R method is highly effective in helping students identify main ideas and important details in reading texts. Several studies specifically highlighted that the Survey and Question stages guide students to predict key points, while the Read and Recite stages help them confirm and restate essential information. Studies such as Suganya (2020) reported improvements in students' abilities to grasp main ideas, interpret implied meanings, and recognize supporting details. Likewise, studies focusing on literal comprehension (e.g., Silfani et al., 2024) showed substantial gains, demonstrating that SQ3R strengthens students' ability to distinguish central concepts from minor information. Observational research by Anggraini (2023) also revealed that students became more active in summarizing key points and discussing essential details during SQ3R activities. In summary, the SQ3R method effectively supports identifying and understanding main ideas and supporting details by guiding students through strategic, purpose-driven reading steps.

The Extent of Students' Reading Comprehension Improvement after SQ3R Implementation

To answer the third research question, the reviewed studies provide clear quantitative and qualitative evidence demonstrating that students' reading comprehension improves significantly after implementing the SQ3R method. Most experimental and quasi-experimental studies included pre-test and post-test comparisons, all showing notable gains. For instance, increases of 11.75 points (Suganya, 2020), 9.95 points (Cataraja, 2022), and an N-Gain of 1.6403 (high effectiveness) in Silfani et al., (2024) indicating great improvement. Additionally, the effect size reported by Alshuaifan (2022) ($\eta^2 = 0.911$) demonstrates that SQ3R contributes very substantially to reading gains. Classroom action research by Agus Salim (2024) also showed consistent improvement across cycles, with average comprehension scores increasing from 37.14 to 66.25. These results collectively demonstrate that students' reading comprehension improves considerably after SQ3R implementation, with gains ranging from moderate to very high across different learning contexts.

The selected publications represent various educational contexts and higher education and investigate different aspects of SQ3R, ranging from its impact on students' reading comprehension skills, motivation, and engagement to its integration with other teaching strategies. To provide a comprehensive and systematic overview of research on implementing the SQ3R strategy in reading comprehension, this study reviewed twenty (20) relevant journal articles published within the last five years. Organizing the data in a structured matrix clarifies similarities and differences in research methods and outcomes. This arrangement enables a better understanding of the overall trend in SQ3R research, highlighting both its effectiveness and potential areas for future exploration.

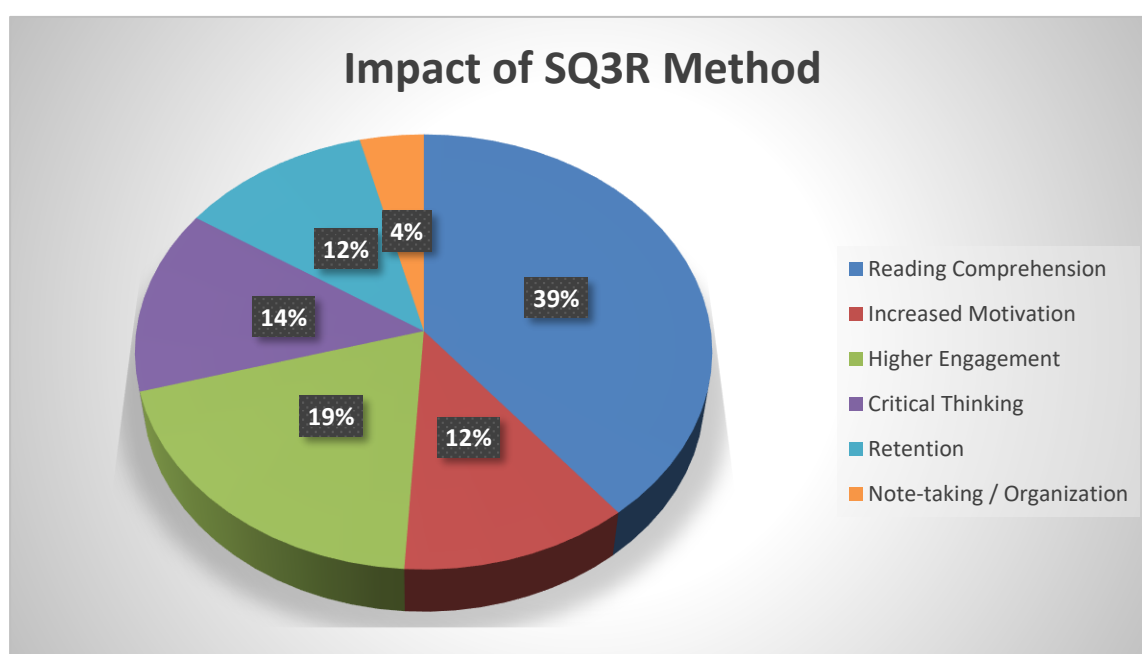


Figure 1. Impact of SQ3R Method Across 20 Research Studies

The literature matrix underpins the analytical discussion in this article, ensuring the synthesis of findings is grounded in credible, up-to-date scholarly evidence. The following section presents details of the reviewed studies. To better capture these patterns, we categorized and quantified the impacts reported in the articles based on explicit statements in each study. These categories include reading comprehension, motivation, engagement, critical thinking, retention, and note-taking or organizational skills. This distribution shows how often each benefit appears across the literature. Figure 1 summarizes and visualizes the proportion of these effects, highlighting the dominant and supporting impacts of the SQ3R method.

Figure 1 presents the distribution of the impacts of the SQ3R method based on an analysis of 20 research articles. The findings show that improved reading comprehension is the most dominant outcome, appearing in all reviewed studies. This consistency indicates that SQ3R is an effective reading strategy for enhancing students' comprehension across different educational levels and learning contexts. The strategy encourages learners to engage actively with texts through systematic stages of surveying, questioning, reading, reciting, and reviewing, which facilitate deeper understanding and information processing.

Other frequently reported impacts include increased student engagement, identified in 10 studies, and enhanced critical thinking, reported in 7 studies. These findings suggest that the Question, Read, and Review stages encourage learners to interact more actively with reading materials, stimulate analytical thinking, and develop their ability to evaluate textual information critically. In addition, six studies reported increased motivation and improved retention, indicating that the Recite and Review stages help reinforce learning, strengthen memory retention, and sustain students' motivation throughout the reading process.

Overall, Figure 1 demonstrates that the benefits of SQ3R extend beyond improving reading comprehension by also supporting students' cognitive and affective development. Although only two studies reported note-taking and information organization, these findings suggest that SQ3R can also foster more systematic learning habits and effective study skills. The relatively low frequency of these outcomes may indicate that previous research has focused primarily on measuring reading comprehension rather than examining other potential benefits of the strategy. The next section (Figure 2) presents the geographical distribution of the reviewed studies to provide a broader perspective on the contexts in which SQ3R has been implemented.

Figure 2 examines how the articles are distributed by the country in which each study was conducted. This will provide a clearer picture of the geographical context of SQ3R implementation.

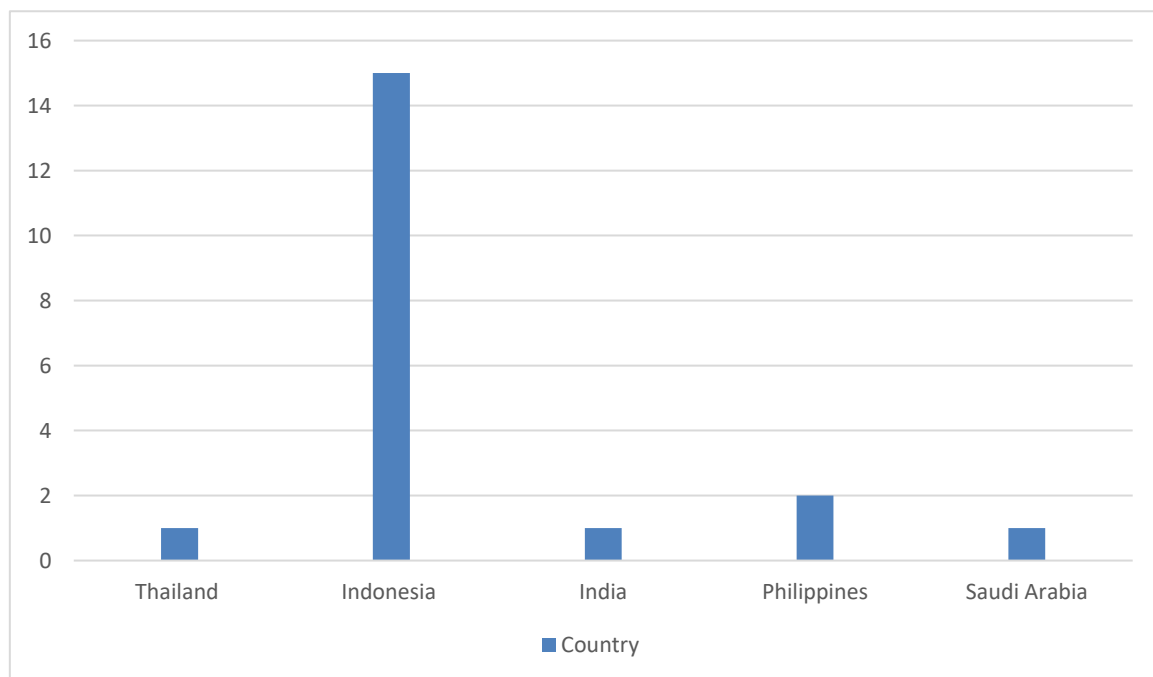


Figure 2. Distribution of the Reviewed Articles by Country

Figure 2 illustrates the distribution of the twenty reviewed studies according to the countries in which they were conducted. Indonesia contributed the largest proportion of studies, accounting for 15 articles (75%), followed by the Philippines with 2 articles (10%), while India, Thailand, and Saudi Arabia each contributed one article (5%). This distribution indicates that research on the SQ3R strategy has focused predominantly on Indonesian higher education, particularly in English

as a Foreign Language (EFL) classrooms, where improving students' reading comprehension has become an important educational priority. The strong representation of Indonesian studies reflects researchers' growing interest in identifying effective reading strategies that address EFL learners' challenges.

However, the geographical distribution also reveals that the current body of evidence remains concentrated within a limited number of countries. Because three-quarters of the reviewed studies were conducted in Indonesia, this review's overall findings are largely influenced by the Indonesian educational system, including its curriculum, instructional practices, and learner characteristics. Consequently, although the available evidence consistently supports the effectiveness of the SQ3R strategy, caution is warranted when generalizing these findings to other educational and cultural contexts. The relatively small number of studies from the Philippines, India, Thailand, and Egypt highlights the need for further empirical research in more diverse educational settings to strengthen the international evidence base regarding the effectiveness of SQ3R.

Table 1 provides a comprehensive overview of the reviewed studies' characteristics. Although the studies differed in research design, participants, and educational settings, they consistently examined the implementation of the SQ3R method as a strategy for improving reading comprehension among university students and EFL learners. Most studies employed experimental or quasi-experimental designs, while others adopted qualitative, mixed-methods, or classroom action research approaches. Across these methodological differences, the findings consistently demonstrated that SQ3R supports reading comprehension by promoting active reading, learner engagement, and higher-order reading skills. The systematic literature review matrix presents the detailed characteristics of each study.

Table 1. Analytical Matrix of SQ3R Strategy in Reading Comprehension Research

No.	Author & Year	Country	Study Design	Participants	Findings
1	(Sofyan & Basyarewan, 2025)	Indonesia	Quantitative	University students	SQ3R significantly improved reading comprehension, learning motivation, and classroom participation.
2	(Alshuaifan, 2022a)	Saudi Arabia	Experimental	Non-English major university students	SQ3R significantly outperformed conventional instruction in improving reading comprehension.
3	(Dordunu, 2024)	Thailand	Quasi-experimental	EFL university students	SQ3R enhanced academic reading performance, questioning skills, and information retention.
4	(Silfani et al., 2024a)	Indonesia	Quantitative	EFL university students	SQ3R supported by Beelinguapp effectively enhanced literal reading comprehension and learner engagement.
5	(Anggraini, 2024a)	Indonesia	Qualitative	University students	SQ3R promoted active participation, learning motivation, and deeper text comprehension.
6	(Fitriani & Komala, 2024)	Indonesia	Quantitative	Polytechnic students	SQ3R improved reading comprehension across different learning styles,

					particularly among visual learners.
7	Ruing et al. (2025)	Indonesia	Qualitative	Law students	SQ3R strengthened critical reading, analytical thinking, and comprehension of legal texts.
8	Wahyuningsih et al. (2025)	Indonesia	Qualitative	Pre-service elementary school teachers (PGSD students)	SQ3R enhanced comprehension, retention, and critical reading of scientific articles.
9	Marzuki (2020)	Indonesia	Classroom action research	EFL university students	SQ3R improved reading achievement, learner motivation, and classroom participation.
10	Cataraja (2025)	Philippines	Mixed methods	University students	SQ3R enhanced literal, inferential, and evaluative comprehension while promoting active learning.
11	Rohmah & Wahyuningsih, (2023)	Indonesia	Qualitative	University students	SQ3R improved reading comprehension, concentration, and critical thinking.
12	Christopher (2024)	Indonesia	Qualitative	Undergraduate EFL students	Students perceived SQ3R as an effective strategy for comprehending academic texts despite implementation challenges.
13	Saputra & Haddar (2024)	Indonesia	Experimental	University students	SQ3R significantly improved reading comprehension, learner engagement, and information retention.
14	Romadhon et al. (2021)	Indonesia	Pre-experimental	Mechanical engineering students	SQ3R significantly increased reading achievement and student engagement.
15	Suganya (2020)	India	Experimental	College students	SQ3R improved comprehension of main ideas, vocabulary, and implied meaning.
16	Cataraja (2022)	Philippines	Quasi-experimental	University students	SQ3R was more effective than conventional instruction in improving reading comprehension.
17	S. Wahyuningsih et al. (2023)	Indonesia	Qualitative	Indonesian higher education students	SQ3R promoted independent learning, systematic reading, and positive learner attitudes.
18	Wardayani (2022)	Indonesia	Experimental	Midwifery students	SQ4R and the combined SQ3R–SQ4R approach achieved higher learning outcomes than SQ3R alone.

19	Said & Agusalim (2020)	Indonesia	Classroom action research	University students	SQ3R improved reading comprehension and oral reading performance.
20	Winanti & Kartikawati (2025)	Indonesia	Pretest–Posttest	Second-semester university students	SQ3R significantly improved reading comprehension, critical thinking, and information retention.

Table 1 provides an overview of studies conducted across five countries, with the majority originating from Indonesia ($n = 15$), followed by the Philippines ($n = 2$), Egypt ($n = 1$), Thailand ($n = 1$), and India ($n = 1$). Most studies employed experimental or quasi-experimental designs to evaluate the effectiveness of the SQ3R method, while several adopted qualitative, mixed-methods, or classroom action research approaches. The participants were predominantly university students from diverse academic contexts, including EFL, teacher education, law, engineering, and health-related programs. Despite differences in research designs and participant characteristics, all studies examined the application of the SQ3R method in reading instruction, providing a strong basis for identifying common patterns and drawing broader conclusions about its effectiveness.

The predominance of studies conducted in Indonesia indicates that SQ3R has attracted considerable attention in Indonesian higher education, particularly in EFL classrooms where reading comprehension remains a major instructional challenge. However, the limited representation of studies from other countries suggests that the existing evidence is geographically concentrated. Consequently, although the findings consistently support the effectiveness of SQ3R, their generalizability to other educational systems and cultural contexts should be interpreted with caution. Future research involving more diverse countries and educational settings is therefore needed to strengthen the global evidence base.

To obtain a more comprehensive understanding of the reviewed literature, the findings were synthesized thematically based on recurring patterns identified across the studies. Rather than describing each study individually, the synthesis integrates common findings into four major themes: (1) improvement in reading comprehension, (2) increased learner engagement, (3) development of higher-order reading skills, and (4) effectiveness across diverse higher education contexts.

Theme 1. Improvement in Reading Comprehension

The most consistent finding across the reviewed studies was the SQ3R method's positive contribution to students' reading comprehension. Regardless of differences in research design, participant characteristics, and educational settings, nearly all studies reported improvements in students' ability to identify main ideas, locate supporting details, infer meaning, understand vocabulary in context, and interpret textual information after implementing SQ3R. These findings indicate that the structured sequence of Survey, Question, Read, Recite, and Review facilitates systematic text processing, enabling learners to organize information more effectively and construct deeper understanding.

The consistency of these findings suggests that SQ3R's effectiveness is closely tied to its structured learning process rather than specific classroom contexts. By encouraging students to preview texts, generate questions, monitor comprehension, and review key information, SQ3R promotes active reading behaviors that contribute to more meaningful comprehension. This recurring pattern across the reviewed studies demonstrates that reading comprehension remains the primary educational outcome of SQ3R implementation in higher education.

Theme 2. Increased Learner Engagement

Beyond improving reading comprehension, another recurring theme was SQ3R's positive influence on learner engagement. Several studies reported that students became more actively involved in classroom activities after introducing the strategy. They demonstrated greater motivation to complete reading tasks, participated more confidently in classroom discussions, and interacted more actively with both the learning materials and their peers.

The findings suggest that learner engagement developed alongside improvements in reading comprehension. Rather than acting as passive recipients of information, students were encouraged to ask questions, monitor their understanding, and reflect on key ideas throughout the reading process. As a result, reading activities became more interactive and student-centered, creating learning environments that supported both academic achievement and active participation.

Theme 3. Development of Higher-Order Reading Skills

A further theme emerging from the reviewed studies was SQ3R's contribution to developing higher-order reading skills. Several studies reported improvements in students' ability to analyze information, identify relationships among ideas, draw inferences, evaluate textual evidence, and synthesize information from multiple sections of a text. In addition, the Recite and Review stages strengthened students' ability to retain information by encouraging repeated retrieval and reflection.

These findings indicate that SQ3R supports deeper cognitive engagement by encouraging learners not only to understand textual information but also to evaluate and interpret it critically. Consequently, SQ3R's benefits extend beyond literal comprehension and contribute to the development of analytical and reflective reading abilities required in higher education.

Theme 4. Effectiveness Across Diverse Higher Education Contexts

The reviewed studies consistently demonstrated that SQ3R was successfully implemented across a wide range of higher education contexts. Positive outcomes were reported among EFL learners, teacher education students, law students, engineering students, health science students, and learners from other academic disciplines. Although the participants, instructional settings, and research methodologies varied considerably, the reported outcomes remained consistently positive.

This consistency suggests that SQ3R's effectiveness is not limited to a particular discipline or educational context. Instead, its systematic and flexible structure allows the strategy to be adapted to different learning environments while maintaining its effectiveness in supporting reading comprehension and related cognitive outcomes. The broad applicability identified across the reviewed studies highlights SQ3R's potential as a versatile instructional strategy for higher education.

Discussion

The findings of this review indicate that the SQ3R method consistently supports the development of reading comprehension among university students across different higher education contexts. This pattern aligns with cognitive learning theory, which emphasizes that learning is more effective when students actively process information rather than receive it passively (Bruning et al., 2011). The five stages of SQ3R encourage learners to activate prior knowledge, formulate questions before reading, monitor their understanding, and review key information after reading, all of which promote meaningful cognitive processing (Pressley & Afflerbach, 1995). These learning processes help students organize textual information more systematically, making it easier to construct meaning and retain what they have learned (Grabe, 2011). The consistency of these findings across the reviewed studies suggests that SQ3R's

effectiveness is not solely related to the instructional procedure itself but also to how the strategy promotes active and meaningful engagement with academic texts.

The positive influence of SQ3R on learner engagement also deserves attention. The reviewed studies suggest that students became more actively involved in the reading process because each stage of the strategy requires purposeful interaction with the text. Rather than reading simply to complete an assignment, students are encouraged to generate questions, identify important ideas, restate information in their own words, and evaluate their understanding throughout the reading process. From a cognitive learning theory perspective, these activities promote meaningful learning by encouraging students to actively organize, monitor, and integrate new information with their existing knowledge (Bruning et al., 2011). This interpretation is consistent with Pressley & Afflerbach (1995), who argue that skilled readers continuously question, monitor, and evaluate their comprehension while reading. Similar observations have also been reported by Grabe (2011), who emphasizes that strategic reading develops when learners actively engage with texts rather than process information. Therefore, the improvements in students' motivation, confidence, and classroom participation identified in this review likely reflect the active, self-regulated learning processes fostered through the SQ3R strategy.

Another important finding is that SQ3R's benefits extend beyond basic reading comprehension to the development of higher-order reading skills. Several studies reported improvements in students' ability to interpret ideas, draw inferences, identify relationships between concepts, and evaluate textual information. These findings suggest that SQ3R encourages deeper cognitive processing by prompting learners to question, reflect, and review information throughout the reading process. This interpretation is consistent with recent evidence showing that metacognitive reading strategies strengthen students' ability to regulate comprehension and improve reading performance (Kan et al., 2020). Likewise, argue that active monitoring and strategic engagement with texts support more effective comprehension, particularly among EFL learners.

This review's findings also have important implications for reading instruction in higher education. As academic reading requires students to process increasingly complex texts, structured reading strategies such as SQ3R can provide practical support for developing more effective reading habits. The systematic sequence of surveying, questioning, reading, reciting, and reviewing encourages students to engage actively with texts while monitoring their own understanding throughout the reading process. This interpretation is consistent with recent studies showing that explicit strategy instruction strengthens reading comprehension by helping learners become more strategic and independent readers (Mortazavizadeh et al., 2002; Wang et al., 2025). Similarly, recent evidence suggests that structured strategy instruction not only improves academic achievement but also promotes learner autonomy, highlighting its potential to support reading instruction across diverse higher education settings.

Despite the positive findings reported across the reviewed studies, several limitations should be considered when interpreting this review's results. Most included studies used quasi-experimental designs, had relatively small sample sizes, and were conducted within a single institution. In addition, most studies originated in Indonesia, which may limit the generalizability of the findings to other educational and cultural contexts. Differences in participants, research procedures, and assessment instruments also make direct comparisons across studies challenging. Therefore, while the overall evidence indicates that SQ3R is a promising strategy for improving reading comprehension, these methodological variations should be considered when interpreting the findings.

CONCLUSION

Based on a systematic review of twenty studies, this review concludes that the SQ3R method consistently improves students' reading comprehension across various educational contexts. In addition to enhancing reading comprehension, the reviewed studies demonstrate that SQ3R positively influences students' motivation, engagement, critical thinking, information retention, and active learning behaviors. These findings suggest that SQ3R's structured stages support deeper cognitive processing and encourage students to become more strategic and independent readers.

This review contributes to the growing body of literature on reading instruction by providing comprehensive evidence of SQ3R's effectiveness across diverse educational settings. Practically, the results offer valuable insights for teachers, curriculum developers, and educational institutions seeking evidence-based strategies to improve reading instruction, particularly in EFL classrooms and higher education contexts. The review also highlights the broader educational benefits of SQ3R beyond reading comprehension, including its potential to foster higher-order thinking skills and active student participation.

Nevertheless, this review has several limitations. Most of the reviewed studies were conducted in Indonesia, which may limit the generalizability of the findings to other educational and cultural contexts. In addition, variations in research design, participant characteristics, educational levels, and assessment instruments across the included studies made direct comparisons challenging. Therefore, future research should investigate SQ3R implementation in more diverse international contexts, use more standardized research designs, and further explore students' metacognitive processes and the long-term effects of SQ3R on reading comprehension and other learning outcomes.

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