CHAPTER I
INTRODUCTION

This chapter provides an introduction to the research by presenting the background of the research, research questions, objectives of the research, scope, and significance of the research.

1.1 Background

English is a core subject in Indonesia and serves as a prominent foreign language for learners across the country. The primary goal of English education is to enhance students' discourse competence, encompassing their communicative abilities in various contexts. Alderson stated (2000) Read implies that we know what it means to read, to process text meaning through some process of interaction with print. Reading, as a crucial component of this competence, enables learners to understand, interpret, and effectively use language. However, reading comprehension in a foreign language is a complex cognitive process that involves more than decoding words; it requires active understanding, analysis, and critical engagement (Maasum and Maroof, 2012). Many English as a Foreign Language (EFL) learners face significant challenges in this area, which may adversely affect their academic achievement.

Metacognition is defined as the ability to be conscious of one's mental processes (Rahimi & Katal, 2012). It is involves awareness and control of thought processes are components of metacognition, sometimes known as "thinking about thinking" (Cubukcu, 2009). Metacognitive awareness enables learners to consciously guide their mental actions, making learning processes more effective and intentional. Based on this understanding, metacognition is considered a fundamental skill that empowers learners to become more aware of their cognitive activities, thereby improving their learning outcomes. Students who are made aware that the thinking process requires the use of metacognitive strategies can develop strategic reading skills and reflect on their own thinking process (Şen, 2009). This awareness varies among individuals depending on characteristics such as language proficiency and age groups (Temur et al., 2010).

Building on this concept of metacognition, metacognitive skills refer ly to the ability to plan, monitor, and regulate one's cognitive activities arning. These metacognitive processes help learners to actively control hing strategies, allowing them to adapt and evaluate their approaches to

studying and problem solving. Developing metacognitive skills has been shown to improve academic performance and enhance the efficiency of learning across disciplines (Şen, 2009; Yüksel, 2012).

When applied to reading, metacognitive reading strategies are deliberate tactics that readers use to plan, monitor, and evaluate their reading comprehension (Flavell, 1979). These strategies help learners regulate their interaction with texts. This is especially important in an EFL contexts, where linguistic and cultural challenges often arise. Furthermore, Flavell (1979) notes that metacognition affects not only language acquisition and reading comprehension but also oral communication, writing, attention, memory, problem-solving, social cognition, and other aspects of self-control and self-instruction. Assessments of students' proficiency in metacognitive language and abilities are essential for determining how well they can handle challenging cognitive tasks such as reading comprehension (Anderson et al., 2012). Students who have metacognitive awareness can identify difficulties in reading, select appropriate strategies, and evaluate their understanding independently. Metacognitive methods encourage students to actively reflect on their thinking while completing tasks (Cubukcu, 2009).

Despite the recognized importance of metacognitive reading strategies, research focusing specifically on their use among Indonesian high school EFL learners remains scarce. In particular, little is known about how these learners differentiate in strategy use according to achievement levels and how these strategies influence actual reading performance. This study aims to fill this gap by investigating these aspects among students at SMAN 4 Luwu.

This study utilizes the Survey of Reading Strategies (SORS) developed by Mokhtari and Sheorey (2002), which classifies metacognitive reading strategies into global reading strategies (planning and monitoring reading), problem-solving strategies (handling difficult texts), and support strategies (using aids like dictionaries). Employing this framework allows for a structured assessment of students' strategic reading behavior in an EFL context.

Considering these perspectives, it is evident that metacognitive awareness ly theoretically significant but also practically essential in the context of ning. In real classroom settings, especially among high school students, es in metacognitive skills often become visible through their reading rs. Some students actively monitor their comprehension, while others

tend to read passively without evaluating their understanding. This observation highlights the importance of investigating how students use metacognitive strategies when reading English texts, particularly in an EFL environment.

In the domain of reading, the application of metacognitive reading strategies can help students understand text content better. Applying metacognitive strategy is regarded as a fundamental ability of students at all educational levels (Ondé et al., 2022). The educational process is greatly impacted by metacognitive knowledge of reading methods, particularly when learning a second language. It focuses on how students use important tactics for good reading comprehension, as well as on how they organize their interactions with the learning environment. However, due to lack of knowledge and insufficient understanding of which reading techniques to use, as well as when and how to apply them effectively, many EFL learners continue to show a considerable deficiency in metacognitive awareness of reading methods (Kusumawardana & Akhiriyah, 2022). The capacity of pupils to organize, oversee, and assess their own reading process is a component of this strategy. Through meaningful classroom activities, metacognitive reading practices help students become more independent learners, gain new knowledge, and devote more time to improving their reading abilities (Vilanuella, 2022).

These insights emphasize that applying metacognitive strategies in reading is not merely a theoretical concern but also a practical necessity, especially for EFL learners who often face comprehension difficulties. From my own experience observing students in the classroom, many read texts without consciously choosing or evaluating the strategies they use. This gap underscores the urgency of exploring how students apply metacognitive reading strategies in real learning situations, and what factors may influence their awareness and usage.

Previous research indicates that successful learners are often metacognitive ones who consciously work to comprehend what they are learning. Understanding and tracking one's comprehension processes are crucial components of proficient reading. The literature frequently refers to this awareness and monitoring process as metacognition, which may be understood as the ss of readers' reading cognition and the self-control strategies they hile monitoring and controlling text comprehension (Mokhtari & Reichard, esearch shows that students who use metacognitive reading strategies etter understanding of texts compared to those who do not. As Maasum

& Maroof (2012) stated, a key component of proficient reading is strategic knowledge, or metacognition, and awareness of the comprehension processes while reading.

To contextualize this study, it is essential to provide background information about SMAN 4 Luwu, the research site. SMAN 4 Luwu is a public high school located at Jalan Pendidikan No. 24, Padang Sappa, Ponrang District, Luwu Regency, South Sulawesi Province. The school is accredited with an "A" rating and is committed to producing high-quality graduates. Since its establishment on October 5, 1994, the school has maintained a strong reputation as a trusted educational institution, supported by adequate facilities and a nationally accredited curriculum. With a land area of 20,000 m², as well as access to high-speed internet and stable electricity, the school fosters an environment conducive to modern, technology-supported learning.

Operating on a five-day school week, SMAN 4 Luwu offers students extended learning time that supports deeper engagement with academic content. This intensive learning schedule provides an ideal context that creates a conducive environment for understanding how students plan, monitor, and evaluate their reading processes. Therefore, the findings of this study are expected to contribute valuable insights for designing more effective reading instruction and for supporting students in becoming more independent, strategic, and competent readers. Additionally, this research aims to develop better instructional approaches that foster student autonomy and competence in reading.

By examining these strategies' profiles, differential use by achievement level, and their influence on reading comprehension, this study aims to provide valuable insight for educators and curriculum developers to design targeted interventions that enhance students' metacognitive awareness and reading performance in Indonesian EFL contexts.

1.2 Statement of the Problem

Reading is one of the most essential academic skills for students, especially in the context of English as a Foreign Language (EFL). To achieve successful comprehension, students need more than just the ability to decode text t also be able to actively monitor, regulate, and evaluate their own reading s. These self-regulatory skills are referred to as metacognitive reading , which have been widely recognized as essential tools for improving

students' reading comprehension. However, many EFL learners continue to face difficulties in understanding English texts due to their limited awareness of these strategies and lack of knowledge on how and when to apply them effectively.

Previous studies (Mokhtari & Reichard, 2002; Maasum & Maroof, 2012; Sen, 2009) have emphasized the importance of metacognitive awareness in reading success. Despite this, there is still limited empirical research that explores how metacognitive reading strategies are applied in specific educational contexts, such as in Indonesian public high schools. In particular, little is known about the metacognitive reading behaviors of students in regions outside of major urban centers, where access to English exposure and resources may differ significantly.

At SMAN 4 Luwu, students are required to engage with various English academic materials as part of their curriculum, yet many still face difficulties in understanding them, which may relate to their lack of metacognitive strategy use. Therefore, it is necessary to investigate the profile of students' metacognitive reading strategies, identify the strategies most frequently used by both high-achieving and low-achieving students, and examine how these strategies influence their reading performance.

1.3 Research Questions

This research aims to address the following research questions, which are central to unrevealing what metacognitive reading strategies used by high school students. The research questions guiding this research are as follows:

1. What is the profile of the students' metacognitive reading strategies at SMAN 4 Luwu?
2. Which metacognitive reading strategies are frequently used by high-achieving students and low-achieving students at SMAN 4 Luwu?
3. To what extent do metacognitive reading strategies influence students' reading performance at SMAN 4 Luwu?

1.4 Objective of the Research

1. To describe the profile of the students' metacognitive reading strategies at SMAN 4 Luwu.

entify the metacognitive reading strategies frequently used by high-ving and low-achieving students at SMAN 4 Luwu.

3. To examine the extent to which metacognitive reading strategies influence students' reading performance at SMAN 4 Luwu.

1.5 Scope of Research

This study focuses on exploring the use of metacognitive reading strategies among second-grade students at SMAN 4 Luwu. In analyzing the metacognitive reading strategies, the researcher uses the Survey of Reading Strategies (SORS) questionnaires developed by Sheorey & Mokhtari (2002).

1.6 Significance of the Research

Theoretically, this study is expected to enhance the theoretical framework of metacognitive reading strategies, particularly in the context of EFL learners. Moreover, this research can serve as a reference for other researchers conducting similar study.

Practically, this study also seeks to provide insights into education by providing a summary of research on the application of metacognitive reading practices for educators and learners. Additionally, it is essential for teachers to acknowledge students' metacognitive awareness as they read.

CHAPTER II
LITERATURE REVIEW

This chapter reviews the existing literature related to the research topic. It aims to provide a comprehensive overview of previous studies, theories, and concepts that are relevant to the current research. Through this review, the chapter identifies research gaps and situates the present study within the broader academic context.

2.1 The Previous

The researcher has tried to review several studies related to metacognitive reading strategy. In this chapter, the researcher highlighted the previous studies to support the current research.

2.1.1 Previous Studies on Metacognitive Reading Strategies

A growing body of literature has explored the significance of metacognitive reading strategies (MRS) in supporting English as a Foreign Language (EFL) learners' comprehension processes. These strategies, which include planning, monitoring, and evaluating one's reading, are particularly useful in helping students become more autonomous and strategic readers. This section presents a comprehensive review of seventeen previous studies related to Metacognitive Reading Strategies (MRS), presented thematically in accordance with the focus of the current study's three research questions: (1) the profile of students' MRS use, (2) differences in MRS use between high-achieving and low-achieving students, and (3) the influence of MRS on reading performance. The review also identifies gaps in the literature that justify the current study's relevance.

2.1.2 Studies on Students' Profiles of Metacognitive Reading Strategies

Several studies have focused on describing the general profile of metacognitive reading strategies among EFL learners. Mahardika (2021), in a study titled "*The Analysis of Proficient and Less Proficient Learners' Metacognitive Reading Strategies: A Case Study of EFL Learners at English Language Studies Program*" in a case study of EFL learners at the English Language Studies Program, explored the metacognitive awareness levels of both proficient and less learners using the MARSI instrument. The study revealed that all nts displayed high awareness across the three categories of nitive reading strategies: global, problem-solving, and support. Similarly,

Dangin (2020) in *"Students' Awareness of Metacognitive Reading Strategies in Academic Reading"* investigated academic reading strategies among English department students and found that problem-solving strategies were the most frequently used, followed by global and support strategies.

In another study titled *"EFL University Students' Metacognitive Awareness of Reading Strategy and Its Correlation with Their Reading Comprehension"*, Kusumawardana and Akhiriyah (2022) examined the correlation between metacognitive awareness and reading comprehension among 60 EFL university students. Their findings indicated that most participants demonstrated high awareness, with problem-solving strategies being the most dominant (M = 3.99), followed by global (M = 3.98) and support strategies (M = 3.65). The results confirm the prominence of problem-solving strategies in reading tasks. Other Indonesian studies (Andriani & Mbato, 2021; Pammu et al., 2014) similarly reported high levels of strategy use among EFL university learners.

However, these studies focused primarily on university-level learners. There is a limited body of research investigating the profile of MRS among senior high school students, especially within the Indonesian context. This study addresses this gap by profiling the MRS use among EFL high school students using the Survey of Reading Strategies (SORS) instrument.

2.1.3 Studies Comparing MRS Use Between High-Achieving and Low-Achieving Students

A number of studies have examined how students' academic performance relates to their use of metacognitive reading strategies. Mahardika (2021), in a study titled *The Analysis of Proficient and Less Proficient Learners' Metacognitive Reading Strategies: A Case Study of EFL Learners at English Language Studies Program*, distinguished between proficient and less proficient learners and found that, although both groups used similar categories of strategies, proficient students applied them more consistently and effectively. Similarly, Nguyen (2021), in *The Relationship between Non-English Major Students' Metacognitive Reading Strategies Use and Reading Comprehension Performance at Dong Nai Technology University*, focused on non-English major university students and found that high-performing students used MRS more frequently and accurately than their low-performing counterparts. These findings suggest that

the frequency and appropriateness of metacognitive strategy use are positively associated with reading performance.

Another relevant study by Köse and Güneş (2021), entitled *Undergraduate Students' Use of Metacognitive Strategies While Reading and the Relationship Between Strategy Use and Reading Comprehension Skills*, examined 236 undergraduate students across several departments. Using the MARSI instrument, they found that the overall use of metacognitive strategies was high. Notably, students' strategy use varied significantly by gender and grade level. Moreover, a strong association was found between the use of Global and Problem-Solving strategies and reading comprehension performance, especially for narrative texts.

Additionally, Popandopulo et al. (2023) in "*Assessment of Students' Metacognitive Skill in the Context of Education 4.0*"compared students' and schoolchildren's metacognitive reading strategies using both the MAI and MARSI instruments. Their findings showed that university students outperformed high school students in overall metacognitive awareness, especially in the problem-solving subscale. While supported and global strategies were used at a moderate level across both groups, the study emphasized the importance of developing students' awareness to foster independent and meaningful reading.

Despite these valuable insights, most of the existing research has been conducted at the tertiary education level. Comparatively little is known about whether high-achieving and low-achieving students at the high school level differ in their use of metacognitive reading strategies. This lack of comparative research within the EFL high school context represents one of the key gaps addressed by the present study.

2.1.4 Studies on the Influence of MRS on Reading Performance

The influence of metacognitive reading strategies on reading comprehension has been widely studied. Villanueva (2022) entitled "*Language Profile, Metacognitive Reading Strategies, and Reading Comprehension Performance among College Students*" explored MRS and reading comprehension performance among 446 college students in the Philippines. The study revealed that problem-solving strategies were the most commonly used and significantly
[...] with better reading comprehension outcomes. The study also found that
[...] proficiency (e.g., Tagalog, Iloco, English) influenced comprehension

Berenji (2021) in "*Enhancing Metacognitive Scaffolding and Comprehension Ability through Problem-Based Learning in an EFL Context*" used a quasi-experimental design to evaluate the effectiveness of problem-based learning in enhancing EFL students' metacognitive strategy use and reading comprehension. The results showed that students who received problem-based instruction significantly outperformed those in the lecture-based group.

Alamer and Alsagoafi (2023) in their study "*Construct Validation of the Revised Metacognitive Awareness of Reading Strategies Inventory (MARSI-R) and its Relation to Learning Effort and Reading Achievement*" validated the MARSI-R instrument using Confirmatory Composite Analysis and Partial Least Squares Structural Equation Modelling. They found that metacognitive strategies influenced reading performance indirectly via motivational intensity (i.e., learning effort), with women using problem-solving strategies more frequently than men. Similarly, Xie et al. (2023) analysing PISA 2018 data from over 11,000 Chinese students, found that strategies such as summarizing and assessing credibility positively influenced scientific literacy, mediated by reading literacy in "*Research on the Influence Path of Metacognitive Reading Strategies on Scientific Literacy*".

In a comprehensive meta-analysis, Sun et al. (2021), under the title "*The Relationship Between Reading Strategy and Reading Comprehension: A Meta-Analysis*" synthesized 57 effect sizes from over 21,000 readers and concluded that reading strategies regardless of type consistently contributed to comprehension. The study also found that first-language readers showed stronger associations between strategy use and comprehension than second-language readers.

However, while these studies affirm the role of MRS in academic reading, few have employed quantitative statistical analyses like regression to determine the extent to which MRS predict reading performance among Indonesian high school EFL learners. The current study addresses this methodological and contextual gap.

2.1.5 Studies Validating MRS Instruments and Methodologies

Accurate measurement of metacognitive strategies depends on valid and ... instruments. Soeharto et al. (2024) in "*The Metacognitive Awareness of ... Strategy among Pre-service Primary Teachers and the Possibility of ... Improvement Using Rasch Analysis*" validated the Indonesian version of

MARSI using Rasch analysis and found that a 4-point Likert scale was more effective than a 5-point scale in measuring pre-service teachers' reading strategies. Ondé et al. (2022) entitled "*Analysis of the Structural Validity of the Reduced Version of Metacognitive Awareness of Reading Strategies Inventory*" evaluated the structural validity of the Spanish version of MARSI-R, concluding that a unidimensional scoring approach may be preferable due to inter-subscale correlations.

Teng and Zhang (2024) under the title "*Validating a New Method for Assessing Young Foreign Language Learners' Metacognitive Knowledge*" proposed a novel method for assessing young learners' metacognitive knowledge through verbal explanation analysis. Their findings revealed that even third-grade students possessed emerging metacognitive awareness, particularly in understanding memory and comprehension processes.

Beyond formal validation efforts, the Survey of Reading Strategies (SORS) developed by Sheorey and Mokhtari (2001) has been widely adopted in empirical EFL research due to its contextual relevance and practical applicability. For instance, Rochmawati et al. (2022) employed SORS to examine metacognitive reading strategies and learning motivation among Indonesian cadets studying Aviation English, highlighting the instrument's value in specialized technical contexts. Likewise, Khellab et al. (2022) utilized SORS alongside reading comprehension assessments in a Libyan EST context to evaluate the effects of explicit reading strategy instruction. Dangin (2020) also adopted SORS to investigate academic reading strategies among Indonesian university learners.

These studies collectively demonstrate the evolving approaches to assessing metacognitive reading strategies and reinforce the appropriateness of selecting the SORS instrument for the current study. Given the EFL context and the characteristics of Indonesian senior high school learners, SORS remains a valid, reliable, and pedagogically suitable instrument for investigating metacognitive reading strategy use.

2.1.6 Studies Linking MRS with Motivation and Learner Characteristics

Several studies have explored how learner-related variables affect the use Öztürk and Aydoğmuş (2021) in a study "*Relational Assessment of nitive Reading Strategies and Reading Motivation*" found significant ns between pre-service teachers' reading motivation and their use of

metacognitive strategies. Strategy use varied by gender, academic achievement, and department. Rochmawati et al. (2022) entitled "*Metacognitive Reading Strategies of English Lesson at Indonesian Civil Aviation Polytechnic*" also identified extrinsic motivation as a stronger predictor of strategy use than intrinsic motivation among aviation cadets. These findings suggest that student motivation and learner identity should not be overlooked when interpreting strategy effectiveness.

2.1.7 Research Gap

In summary, existing literature demonstrates the positive role of metacognitive reading strategies in improving reading comprehension across diverse contexts. Most studies have been conducted in tertiary settings, confirming the dominance of problem-solving and global strategies. However, three research gaps remain:

1. Limited studies have profiled Metacognitive Reading Strategies use among Indonesian high school students in EFL settings.
2. Few studies have compared strategy use between high- and low-achieving high school students.
3. There is a scarcity of research using quantitative approaches particularly multiple linear regression to determine the influence of metacognitive reading strategies on reading performance in secondary education.

Thus, the present study aims to fill these gaps by (1) profiling high school students' MRS use, (2) comparing the frequency of MRS employed by high-achieving and low-achieving students, and (3) analysing the influence of MRS on reading performance using statistical methods. These contributions are expected to enrich the understanding of MRS in Indonesian secondary education and provide practical implications for EFL reading instruction.

2.1.8 The Novelty

The novelty of this study lies in its specific focus on profiling metacognitive reading strategies among senior high school students in Eastern Indonesia, a context that remains largely underexplored in previous research. While most prior have targeted university students or teachers, few have applied nally validated instruments such as the SORS to systematically examine use at the high school level, particularly in rural or regional areas like

SMAN 4 Luwu. By adapting and contextualizing established measurement tools for this unique population, the present study not only addresses an empirical gap in the literature but also generates locally relevant insights that can inform effective reading instruction and intervention in similar educational settings.

Moreover, this research extends beyond descriptive profiling by employing inferential statistical methods such as independent samples t-tests to compare metacognitive strategy use between high-achieving and low-achieving students, offering a nuanced understanding of how strategy utilization differs across achievement levels. Additionally, the study examines the individual influence of each metacognitive reading strategy category: global strategies, problem-solving, and support strategies on students' reading performance through regression analysis, providing empirical evidence of their differential impacts within the secondary education context.

This comprehensive approach represents a valuable contribution to both national and international understandings of metacognitive strategy development in EFL learners at the secondary level, emphasizing not only the prevalence of strategy use but also its relationship with academic achievement in less-studied educational settings.

2.2 Theoretical Background

2.2.1 Reading

Goodman (1967) notes, reading is a selective process. It involves partial use of available minimal language cues selected from perceptual input on the basis of the reader's expectation. Read implies that we know what it means to read, to process text meaning through some process of interaction with print (Alderson, 2000). According to Anderson (2003), reading is the process by which readers construct meaning by fusing information from a book with what they already know. Grabe (2009) asserts that understanding is the primary goal of reading, which involves a complex interplay of activities. Understanding, interpreting, and deriving meaning from written texts through active engagement with the material, concept connections, and information synthesis are all components of reading comprehension. Strategic reading is defined as the ability of the reader to use a variety of reading strategies to accomplish a purpose for reading (Anderson,

The concept reading for meaning and reading for remembering first time proposed by Baker & Brown (1980). In their research they defined reading for meaning is essentially an attempt to comprehend, and any attempt to comprehend must involve comprehension monitoring whereas reading for remembering identified important ideas, testing one's mastery of material, developing effective study strategies, and allocating study time appropriately. Critical reading involves not only imposing sense on the material in the way the author intended, but going beyond the information given and critically evaluating it. Thus, good comprehension also depends on an awareness that authors write for a variety of purposes and that they may employ propaganda techniques to sway readers to a particular point of view.

2.1.2 Reading Process and Product

Just as Alderson (2000) notes, Reading literature frequently involves making a distinction between the process of reading and the final product, which is the outcome of that process. Presumably, the reader is also "thinking" about what he is reading, including its meaning for him, its connections to previous texts he has read, to things he already knows, and to what he anticipates happening next in texts such as this one. Presumably, he is considering the text's usefulness, entertainment value, boredom, and craziness. He can be deliberately considering how easy or tough reading is for him, as well as strategies for getting past the challenges or sustaining the enjoyment. He can be totally engrossed in "reading" and not be aware of what is going on around him or how he is reading. When a reader reads, a variety of things can obviously be happening. The process is probably going to be dynamic, varied, and different for the same reader on the same text at a different moment or with a different reading goal. Therefore, the likelihood that the process will vary for various readers on various texts at various times and for various reasons is significantly higher. Although it is obviously a challenging task, comprehending the reading process is likely crucial to comprehending the nature of reading. Usually, the procedure is private, internal, and silent.

Research has focused on examining the eye movements of readers, eresting insights have been gained from eye movement aphy. Watching what the eyes are doing, however, may not tell us brain is doing if, in Smith's (1971) terms, 'What the Brain Tells

the Eye is More Important than What the Eye Tells the Brain.' An alternative to eye movement photography for externalizing the reading process is to ask the reader to read aloud. Another way to study the reading-aloud process is through miscue analysis, which examines the errors that readers make when reading aloud (for further information, see Goodman, 1969). However, reading aloud is not the "normal" way most individuals read, because reading silently and reading aloud might involve quite distinct processes. The only way to examine the private process of reading could be to externalize it, yet doing so runs the danger of distorting and altering the process's essence.

An alternate method of analyzing the reading process is to look at the final result of reading. It is commonly assumed that even though various readers may use rather varied reading strategies, their final comprehensions will be comparable. Thus, even if there may be several approaches to achieving a certain knowledge, the reader's understanding rather than the method by which they get at it is what counts. Focusing on what has been grasped thereby lessens the issue of potentially limitless diversity in reading processes.

According to Alderson (2000), there are at least two limitations to product approaches to reading, one is the variation in the product, the other is the method used to measure the product. Even when memory is taken into account, readers may still interpret the same material differently. This is due to the fact that a text does not have a meaning that the reader must uncover. The reader and the text must interact for meaning to be realized; the text has "meaning potential" (Halliday, 1979; Widdowson, 1979). Reading will undoubtedly provide various results since, as will be seen later, individual readers have varied histories and experiences that will affect how they perceive a book.

The technique utilized to gauge the understanding result is the second drawback already indicated. It might be challenging to discern between comprehending and remembering when using some techniques (such as recall protocols), which require readers to recite what they have read without the text. One runs the danger of the test method impact if readers are unfamiliar with testing methodologies.

conclusion, reading may be viewed as either a process or the result of ess. The focus on process or product is likely to have an impact on any heory. Despite certain issues, the product is simpler to analyze than the

2.2.3 Metacognition

Flavell (1979) provided one of the earliest definitions of metacognition, defining it as knowledge of one's own cognitive processes and products, or anything associated with them. According to Baker & Brown (1980) there are two clusters of metacognition mentioned in that statement: knowledge about cognition and regulation of cognition. The first cluster is concerned with a person's knowledge about his own cognitive resources and the compatibility between himself as a learner and the learning situation. the main purpose of which is to find out how much a child knows about certain pertinent features of thinking, including himself as a thinker. The focus is on measuring the relatively stable information that the child has concerning the cognitive processes involved in any academic task. The second cluster of activities studied under the heading metacognition consists of the self-regulatory mechanisms used by an active learner during an ongoing attempt to solve problems. Anderson (2002) notes, Metacognition can be defined simply as thinking about thinking.

According to Flavell (1979) the monitoring of a wide variety of cognitive enterprises occurs through the actions of and interactions among four classes of phenomena: metacognitive knowledge, metacognitive experience, goals/tasks, and action/strategies; (a) the portion of your (a child's or adult's) stored world knowledge that deals with people as cognitive beings and their various cognitive tasks, goals, behaviors, and experiences is known as metacognition knowledge; (b) any conscious cognitive or affective experiences that relate to and accompany any intellectual endeavor are considered metacognitive experiences; (c) goals (or tasks) refer to the objectives of a cognitive enterprise; (d) actions or strategies refer to the cognitions or other behaviours employed to achieve them.

Flavell 1979 made the assumption that the only ways that metacognitive knowledge and metacognitive experiences vary from other types are in their purpose and substance, not in their form or quality.

1) Metacognitive Knowledge

Metacognitive knowledge consists primarily of knowledge or beliefs about what factors or variables act and interact in what ways to affect the course and of cognitive enterprises. There are three major categories of these factors les *person, task,* and *strategy: (a*) the person category encompasses g that you could come to believe about the nature of yourself and other s cognitive processors. It can be further divided into views regarding

universals of cognition, intraindividual distinctions, and interindividual differences; (b) the task category concerns about the characteristic of tasks that can affect the way someone manages cognitive efforts, for example whether the task is difficult, familiar, or boring; (c) as for the strategy category, a lot of information might be learnt about which strategies are most likely to be successful in reaching which subgoals and objectives in which types of cognitive tasks. Metacognitive knowledge often involves a combination of the three categories. For example, someone may realize that they are more effective in using certain strategies in certain tasks than others.

2) Metacognitive Experiences

Metacognitive experience, which is a person's awareness of their own thinking process and how this experience can affect learning strategies, problem solving, and the development of metacognitive knowledge. Metacognitive experiences can be brief or lengthy in duration, simple or complex in content. Metacognitive experiences are especially likely to occur in situations that stimulate a lot of careful, highly conscious thinking: in a job or school task that expressly demands that' kind of thinking. This experience helps individuals control and evaluate their own thoughts.

Some metacognitive experiences are described as items of metacognitive knowledge that have entered consciousness (for example, recognize that certain strategies have been successful before). Some metacognitive experiences clearly cannot be described that way, however still affects someone's thoughts (for example, the feeling that someone is not ready for an exam). Thus, As a result, metacognitive experiences and knowledge comprise partially overlapping sets: Certain knowledge may become aware and encompass such experiences, whereas other knowledge may never do so. Some experiences contain such knowledge, while others do not.

Metacognitive experiences can have very important effects on cognitive goals or tasks, meta- cognitive, knowledge, and cognitive actions or strategies: (a) lead you to establish new goals and to revise or abandon old ones; (b) affect your metacognitive knowledge base by adding to it, deleting from it, or revising it; (c) strategies aimed at either of two types of goals cognitive or metacognitive. strategies are invoked to *make* cognitive progress, metacognitive s to *monitor* it. However, Sometimes the same strategy can be used for nese goals. Metacognitive experience is an important part of the learning

and thinking process. By realizing and managing this experience, a person can develop more effective thinking strategies, increase understanding, and adjust the way they learn and solve problems.

Metacognition results in critical but healthy reflection and evaluation of thinking that may result in making specific changes in how one learns. Metacognition is not simply thinking back on an event, describing what happened, and how one felt about it. It requires much deeper thinking and processing Anderson (2004).

2.2.4 Metacognitive Reading Strategies

According to Flavell (1979), Oral communication of information, oral persuasion, oral comprehension, reading comprehension, writing, language acquisition, attention, memory, problem solving, social cognition, and various forms of self-control and self-instruction are all areas in which metacognition plays a significant role. In our memory there is knowledge about ways to manage and control the thinking process (metacognitive strategy) as well as ways to process information (cognitive strategy). Skimming a set of directions to get a rough idea of how hard they are going to be to follow or remember is a metacognitive strategy. Another is to paraphrase aloud what someone has just told you to see if that is what she meant. Carrell et. al. (1989) argued that strategy research suggests that less competent learners may improve their skills through training in strategies evidenced by more successful learners. Six major groups of L2 learning strategies have been identified by Oxford (1989, as cited in Vanniarajan, 1990): cognitive strategies, metacognitive strategies, memory strategies, compensatory strategies, affective strategies, and social strategies.

Since effective readers must have some awareness and control of the cognitive activities they engage in as they read, most characterizations of reading include skills and activities that involve metacognition. Some of the metacognitive skills involved in reading are mentioned by Brown (1980): (a) clarifying the purposes of reading, that is, understanding both the explicit and implicit task demands; (b) identifying the important aspects of a message; (c) focusing attention on the major content rather than trivia; (d) monitoring ongoing activities to [determin]e whether comprehension is occurring; (e) engaging in self-questioning to [determin]e whether goals are being achieved; and (f) taking corrective action when [failures i]n comprehension are detected. To become good readers, they should

know what to do when they encounter difficulties (Anderson, 2004). Baker & Brown (1980) identified that good readers use metacognitive strategies to understand the text, such as: checking the outcome of any attempt to solve the problem, planning one's next move, monitoring the effectiveness of any attempted action, testing, revising, and evaluating one's strategies for learning.

Wenden (1998) highlights metacognitive knowledge refers to information learners acquire about their learning, while metacognitive strategies are general skills through which learners manage, direct, regulate, guide their learning, i e planning, monitoring and evaluating. Three basic aspects of how metacognitive strategies are applied in language learning. A further description of these aspects is presented as follows:

1) Planning

Wenden (1998) said metacognitive knowledge is a prerequisite for the self-regulation of learning it informs planning decisions taken at the outset of learning. According to Pintrich et. al. (2000) planning is an important aspect of regulating cognition and behaviour and involves the setting of goals that can be used to guide cognition in general and monitoring in particular. The goal acts as a criterion against which to assess and monitor cognition, just as the temperature setting of a thermostat guides the operation of the thermostat and heating/ cooling system. For example, if one student has a goal of mastering the text material as opposed to another student who just wants to complete the reading assignment, then the first student will monitor and regulate her reading cognition in a way that can lead to deep understanding (e.g., use self-questioning or reread parts that are not understood). In contrast, the second student may just proceed to read through the material and, when at the end of the selection, be satisfied that the goal of completing the reading has been reached. Of course, planning is most often assumed to occur before starting a task, but goal-setting can actually occur at any point during performance. Learners may begin a task by setting specific goals for learning, goals for time use, and goals for eventual performance, but all of these can be adjusted and changed at any time during task performance. However Wenden (1998) argued that for some aspects of planning, i.e. the procedures that task analysis, metacognitive knowledge is insufficient. Domain je plays an essential and complementary role.

2) Monitoring

Wenden (1998) defined monitoring consists of keeping track of how the learning process is going and taking appropriate measures to deal with difficulties that interfere with the process monitoring consists of keeping track of how the learning process is going and taking appropriate measures to deal with difficulties that interfere with the process.

Monitoring can also lead learners to refine and expand their metacognitive knowledge. As they monitor, they are prompted to examine the relationships among learning goals, means of achieving them, task outcomes and to accommodate their knowledge to what has been observed. Thus, realizing that list making (the means) which he had selected to facilitate understanding of technical terms (learning goal) was not helping him to understand (learning outcome), the hypothetical learner discontinued its use having learned that it was not an effective strategy (revision of strategic knowledge) Thus, in the case of monitoring, the relationship with metacognitive knowledge is reciprocal On the one hand, it is the basis for monitoring and, on the other, the knowledge generated by monitoring can be used to revise the learners' existing knowledge base.

3) Evaluating

Metacognitive knowledge provides evaluation criteria to assess learning outcomes after the learning task is completed. The metacognitive knowledge learners have acquired about themselves as learners (personal knowledge) will be better able to choose appropriate learning goals and criteria they use for evaluating learning outcomes, as noted by Wenden (1998).

According to Philip and Hua (2017), metacognitive evaluation means comparing whether or not a learner has achieved his learning goal which he sets early before learning. If the learner finds that the goal is not achieved yet, he needs to re-evaluate the learning goal because it is possible that the goal is unrealistic enough to be pursued using certain strategies. To create effective learning process, a learner needs to set and strive for realistic goal using any strategy or modified strategy. Further, metacognitive evaluation is fundamental in how it helps learners recognize their strengths and weaknesses in learning. By knowing those

and weaknesses, learners can improve their learning plan that helps to ore effective learning process and results to expected learning outcomes. n, Anderson (2008) said that evaluation eases a learner to achieve his goals.

Pintrich et. al. (2000) divided three general components of metacognition and self-regulated learning: metacognitive knowledge, metacognitive judgements and monitoring, self-regulated and control.

1) Metacognitive Knowledge

Metacognitive knowledge has been further broken down into declarative, procedural, and conditional metacognitive knowledge. Declarative knowledge of cognition encompasses understanding the various cognitive methods that can be employed for learning, such as rehearsal and elaboration. Understanding how to carry out and apply the different cognitive methods is a component of procedural knowledge. Knowing that there are elaboration techniques like summarising and paraphrasing might not be sufficient; it's crucial to understand how to apply them successfully. Lastly, understanding when and why to employ the different cognitive techniques is a component of conditional knowledge. Elaboration strategies, for instance, might be suitable for particular tasks or goals (learning from text); other techniques, like rehearsal, might be better suited for other tasks or objectives (trying to recall a phone number). The flexible and adaptive application of different cognitive techniques depends on this kind of conditional knowledge.

2) Metacognitive Judgements and monitoring

Metacognitive judgments and monitoring are more process-related and reflect metacognitive awareness and ongoing metacognitive activities individuals may engage in as they perform a task. Four general metacognitive processes may be included in these exercises: (a) feeling of knowing (FOK), making an assessment of how easy or difficult a learning task will be to perform; (b) learning and comprehension monitoring or judgements of learning (JOL), monitoring comprehension of learning ; (c) ask difficulty or ease of learning judgements (EOL), having the experience or "awareness" of knowing something, but being unable to recall it completely; (d) confidence judgements, making a judgment of the correctness or appropriateness of the response.

3) Self-regulated and control

Self-regulation and control are the aggregate terms for the kinds of actions people do to modify and adjust their thoughts or behaviours. there are a number

nt activities that can be considered part of the various control and

n processes. There are four general categories: a) planning, setting goals

ng, time use, and performance; b) strategy selection and use, making

about which strategies to use for a task or when to changing strategies

while performing a task; c) resource allocation, control and regulation of time use, effort, pace of learning and performance; d) volitional control, control and regulation of motivation, emotion, and environment.

Metacognition combines various attended thinking and reflective processes. Anderson (2002) divided into five primary components of metacognitive reading strategies: preparing and planning for learning; selecting and using learning strategies; monitoring strategy use; orchestrating various strategies; and evaluating strategy use and learning. Each of these five metacognitive components interacts with the others. Teachers should model strategies for learners to follow all in five areas, which are discussed below.

1) Preparing and Planning for Learning

Planning and preparation are crucial metacognitive abilities that might enhance student learning. Students are considering what they need or want to achieve and how they plan to go about achieving it when they prepare and plan in connection to a learning goal. By being clear about the specific learning objectives, they have set for the class and helping the students create their own, teachers may encourage this kind of introspection. It will be simpler for the students to gauge their progress if the aim is stated more precisely. The instructor may assign the class the task of learning the terminology from a specific textbook chapter.

2) Selecting and Using Learning Strategies

The learner may think and make deliberate choices regarding the learning process when they possess the metacognitive ability to choose and use certain methods in a given environment for a specified goal.

For metacognitive education to be successful, students must be explicitly taught a range of learning techniques as well as when to apply them. Readers of second languages, for instance, have a number of options when they come across unfamiliar vocabulary that they have decided they must know in order to comprehend a text's core point. Word analysis is one potential tactic, such as breaking a word down into its stem and prefix. Using context clues to assist guess a word's meaning is another potential tactic. However, students must be explicitly taught how to apply these tactics and be aware that no one strategy will always be

Instructors must demonstrate to students how to select the approach that ...ighest likelihood of success in a certain circumstance. Unfamiliar terms ... prefixes or suffixes the learner is familiar with, like anti- or -merit, are ...andidates for applying a word analysis technique.

3) Monitoring Strategy Use

Students can better keep themselves on track to fulfil their learning objectives by keeping an eye on how they employ learning strategies. After they have chosen and started putting certain tactics into practice, they must frequently assess if they are still being used as intended.

Students might be taught, for instance, that a good writing technique entails considering their audience and the reason they are writing (e.g., to explain, to convince). Students can be taught that in order to keep an eye on how they are using this technique, they should periodically stop writing to ask themselves questions about what they are doing. For example, they can ask themselves whether they are giving their intended audience enough background information or whether the examples they are using effectively support their points.

4) Orchestrating Various Strategies

Being able to coordinate the application of many strategies is a crucial metacognitive ability. One key factor that separates strong and weak second language learners is their capacity to coordinate, arrange, and link the different tactics at their disposal. Teachers can help students by educating them about the many approaches at their disposal. For instance, they can teach them how to deduce the meaning of an unfamiliar word by using both word analysis and context clues. Additionally, the instructor must demonstrate to the class how to identify when a particular approach isn't working and how to switch to a different one. For instance, a student who has identified anti as a prefix meaning against an attempt to utilize word analysis to ascertain the meaning of the word antimony. But in this case, such tactic won't work. Antimony is a metallic chemical element that has nothing to do with being opposed to or against anything; the prefix "anti" is not used here. If the learner is unable to understand a word through word analysis, she must know how to use alternative methods, including context clues, to gain an understanding of the term.

5) Evaluating Strategy Use and Learning

When second language learners try to assess the efficacy of their actions, they are actively engaging in metacognition. By asking students to carefully their answers to the following questions, teachers can assist students in g the strategies they employ: (1) What do I hope to achieve? (2) What n I employing? (3) How effectively do I use them? (4) What other options ? The second language student can reflect throughout the learning cycle

by answering these four questions, which incorporate all of the earlier elements of metacognition. While choosing and employing certain methods refers to the question of which techniques are being employed, preparation and planning connect to determining what has to be done. The monitoring of strategy use is addressed in the third question, and strategy orchestration is covered in the fourth. At this step of metacognition, the entire cycle is assessed. The teacher can use the following four questions to assess students' use of strategy when teaching the specific reading ability of major idea comprehension.

Sheorey and Mokhtari (2001) conducted significant research on the identification of metacognitive reading strategies of L2 learners. They divided metacognitive reading strategies into three main categories:

1) metacognitive strategies or global reading strategies, are those intentional, carefully planned techniques by which learners monitor or manage their reading, such as having a purpose in mind, previewing the text as to its length and organization, or using typographical aids and tables and figures;

2) cognitive strategies or problem solving strategies, are the actions and procedures readers use while working directly with the text. These are localized, focused techniques used when problems develop in understanding textual information; examples include adjusting one's speed of reading when the material becomes difficult or easy, guessing the meaning of unknown words, and rereading the text to improve comprehension;

3) support strategies, are basically support mechanisms intended to aid the reader in comprehending the text such as using dictionary, taking notes, underlining, or highlighting textual information. To assess the metacognitive reading strategies of L2 readers who are reading academic literature, they have created a brand-new tool called the Survey of Reading Strategies (SORS).

Research on reading makes it abundantly evident that students must possess metacognitive awareness of their actions. They must relate their reading goals to the learning techniques they employ when working on an assignment. According to Carrel. Et. al (1989) students who tend to use metacognitive strategies are more effective in understanding texts than those who do not apply

2.2.5 An Overview Reading Models

2.2.5.1 Bottom-up Model

A bottom-up reading model is a reading model that driven by a process that produces meaning (or, to put it another way, reading is driven by text) and moves from part to whole. It places a strong emphasis on written or printed text. This model is often used by beginner readers or when reading unfamiliar words.

To put it another way, Gough (1972) suggests a bottom-up or phonics-based model of reading that shows how reading is processed serially, moving from letter to sound to words to meaning.

2.2.5.2 Top-Down Model

A top-down reading model is motivated by meaning and moves from whole to part. It places emphasis on the reader's contributions to the text. Another name for it is the concept-driven model.

According to these theories (e.g. Goodman, 1967; Smith, 1971), the ability to choose the fewest, most useful clues required is what leads to effective reading rather than the ability to precisely perceive and identify every aspect in a word. They argue that because of their prior experiences and linguistic understanding, readers already have an idea of what may be significant in the text. According to them, readers have access to two more significant types of information that are available simultaneously: syntactic cues (grammatical or phrase sense) and semantic cues (meaning), rather than being limited to only the letters in front of them. Thus, readers are able to predict the words that will appear in the text by drawing on their own past knowledge of the subject and their linguistic skills. After reading a sample of the print, readers make a rough guess as to what the next word will be, and they utilise meaning to verify their guess. Readers resample the text and develop a new hypothesis if meaning is formed. As a result, readers may verify word identification by quickly sampling the markings on the page.

In this model it is evident that the flow of information proceeds from the top downward so that the process of word identification is dependent upon meaning first. As a result, much as listeners may predict what speakers will say next, the understanding of the language pattern and higher level processes ted in prior experiences interact with and guide the information flow.

Reading, according to this perspective, is a form of "psycholinguistic guessing game" (Goodman, 1967).

The top-down reading model relies on predictions and prior knowledge to understand the text as a whole, rather than analysing each word in detail. Reading in this model is an active and interactive process where readers make hypotheses about meaning and verify them while reading. Therefore, reading is considered as a "*psycholinguistic guessing game*" because it involves prediction and hypothesis testing like in a word guessing game.

2.2.5.3. Interactive Model

Since neither the top-down nor bottom-up models of the reading process fully explain what happens throughout the reading process, Rumelhart (1977) suggests an interactive model where non-sensory information and letter characteristics or data-driven sensory information come together in one location. Rumelhart refers to this location as a "message board" using an analogy from computers. This paradigm calls for the application or integration of all the previously identified information sources and views reading as a synthesis of patterns rather than just a bottom-up or top-down activity. Stanovich (1980) argued that interactive models of reading better explain the available data on how proficient and struggling readers use orthographic structure and sentence context when paired with the compensatory processing assumption, which states that a deficit in any one process will lead to a greater reliance on other knowledge sources, regardless of their level in the processing hierarchy. Interactive models suggest that readers combine both strategies dynamically: Rumelhart's Model (1977) allows for interaction between different knowledge sources (linguistic and background knowledge). While Stanovich's Compensatory Model (1980) suggests that readers compensate for weaknesses in one area (e.g., poor word recognition) by relying on another (e.g., background knowledge).

Anderson (2004) said that The interactive models are the most accurate depiction of what occurs when our eyes interact with written materials, according to reading researchers. Both the higher-level and lower-level processes required for successful reading are combined in interactive models. Rapid word recognition capacity to combine words into syntactic and semantic units are nts of the lower-level processes. The higher-level processes include the capacity to track text comprehension and draw on existing information.

2.3 Conceptual Framework

The conceptual framework of this study centers on an investigation of metacognitive reading strategies among senior high school students EFL. Figure 1 illustrates the conceptual framework underpinning this study. The framework is structured around the integration of established theories and measurement tools relevant to metacognitive reading strategies and students' reading achievement.

At the top, the "*Reading Process*" is positioned as the overarching domain. The framework then draws upon Flavell's (1979) Metacognitive Theory, which conceptualizes metacognition as a process involving planning, monitoring, and evaluating. These three fundamental components signify how students actively regulate and manage their reading activities.

Building on this foundation, the next layer incorporates Shorey & Mokhtari's (2002) Survey of Reading Strategies (SORS), which operationalizes metacognitive strategy use into three key categories: Global Reading Strategies, Problem-solving Strategies, and Support Strategies. Global strategies pertain to methods for setting purpose and conceptualizing the text as a whole, problem-solving strategies involve techniques to overcome comprehension challenges while reading, and support strategies refer to actions that assist comprehension, such as taking notes or using reference materials.

At the base of the framework lies "*Students' Reading Achievement*," representing the outcome variable of interest in this study. The framework hypothesizes that students' metacognitive reading strategy use (as conceptualized by SORS and informed by Flavell's theory) directly influences their reading achievement. Thus, the diagram demonstrates a logical flow, beginning from the theoretical understanding of metacognitive processes, its operationalization through standardized instruments, and culminating in its impact on reading achievement.

This conceptual framework provides a coherent structure for exploring the relationships among metacognitive strategies and reading performance, serving as the foundation for the formulation of research questions, data collection, and analytical procedures in the present study.
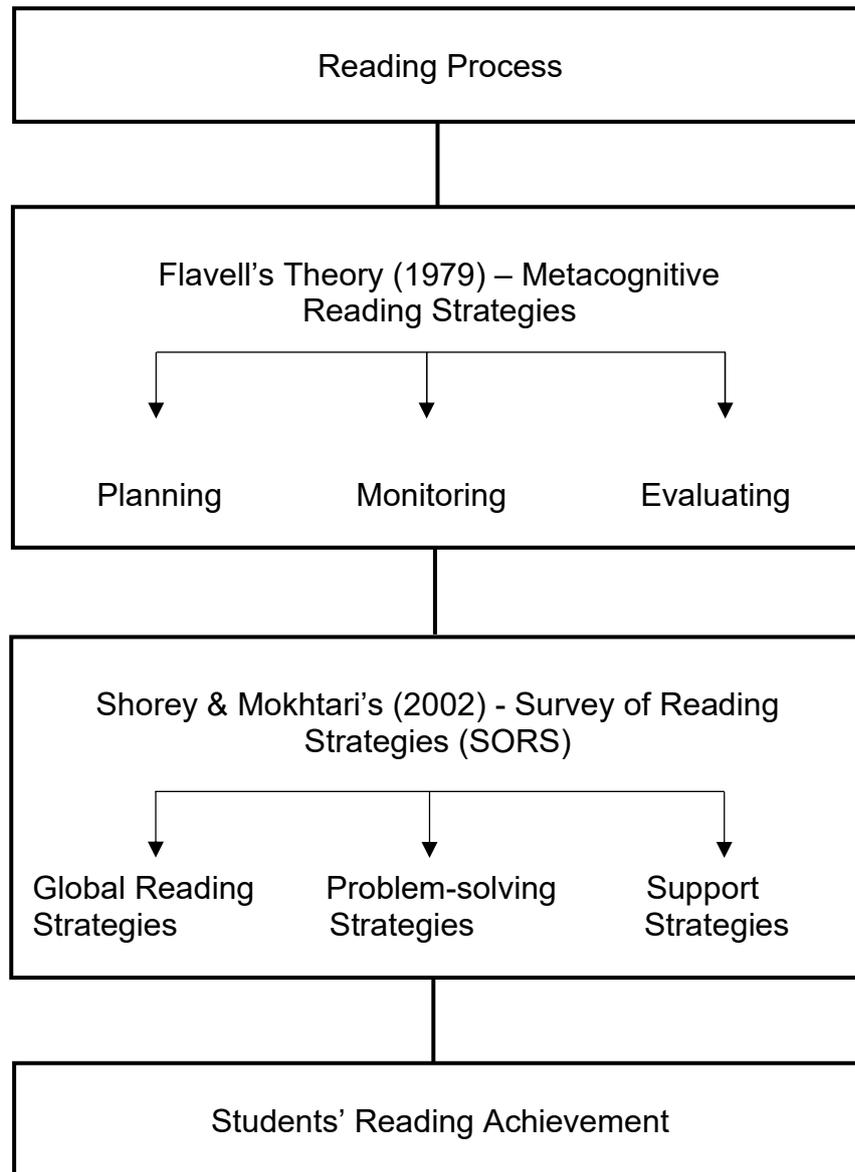
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┌─────────────────────────────────────────────────────┐
│                   Reading Process                    │
└─────────────────────────────────────────────────────┘
                          │
┌─────────────────────────────────────────────────────┐
│       Flavell's Theory (1979) – Metacognitive        │
│                  Reading Strategies                  │
│                                                      │
│      Planning        Monitoring        Evaluating    │
└─────────────────────────────────────────────────────┘
                          │
┌─────────────────────────────────────────────────────┐
│    Shorey & Mokhtari's (2002) - Survey of Reading    │
│                  Strategies (SORS)                   │
│                                                      │
│   Global Reading   Problem-solving      Support      │
│     Strategies        Strategies       Strategies    │
└─────────────────────────────────────────────────────┘
                          │
┌─────────────────────────────────────────────────────┐
│             Students' Reading Achievement            │
└─────────────────────────────────────────────────────┘
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Figure 1. Conceptual Framework

2.4 Hypothesis

Based on the theories discussed above as well as the conceptual framework, this study processes hypothesis related to the test of the relationship between the two variables. The hypothesis is presented below:

H_0: There is no significant relationship between students' metacognitive reading strategies and their reading performance.

H_1: There is a significant relationship between students' metacognitive reading strategies and their reading performance.