AMERICAN UNIVERSITY OF BEIRUT

THE ROLES OF READING STRATEGIES, READING MOTIVATION, AND READING ANXIETY IN LITERAL AND HIGHER-ORDER READING COMPREHENSION AMONG EFL UNIVERSITY STUDENTS

by
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This thesis represents more than research, writing, and academic perseverance. It is a testament to resilience. It was completed during one of the most challenging periods of my life: my battle with cancer. This work exists because I endured, and I could not have done so without the remarkable people who supported me.

First and foremost, I am profoundly grateful to Allah, whose mercy and guidance sustained me throughout this journey.

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To anyone reading this while facing challenges: may you find the resilience, support, and grace that carried me through mine.

ABSTRACT

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Title: The Roles of Reading Strategies, Reading Motivation, and Reading Anxiety in Literal and Higher-order Reading Comprehension Among EFL University Students

This study investigates how metacognitive reading strategies, motivation, and foreign language anxiety influence both literal and higher-level reading comprehension in EFL learners. Based on the Schema Theory, Strategic Reading Model, Expectancy-Value Theory, and Foreign Language Anxiety Theory, this research involved 176 undergraduates aged 18-22 years with diverse linguistic and educational backgrounds in the USAID Higher Education Scholarship Program at the American University of Beirut. Participants completed the Adult Reading Motivation Scale, the Foreign Language Reading Anxiety Scale, the Survey of Reading Strategies, and a reading comprehension test. Data analysis involved descriptive statistics, correlation, and multiple regression analyses to study the relationships among the preceding variables and their roles in literal and higher-order reading comprehension. Results showed that students tend to depend on global reading strategies the most; however, problem-solving strategy were shown to be the strongest predictors of reading comprehension. Meanwhile, reading anxiety and reading motivation did not reach statistical significance as predictors of reading comprehension. Implications for improving the academic reading skills among diverse and underserved EFL student groups are presented.

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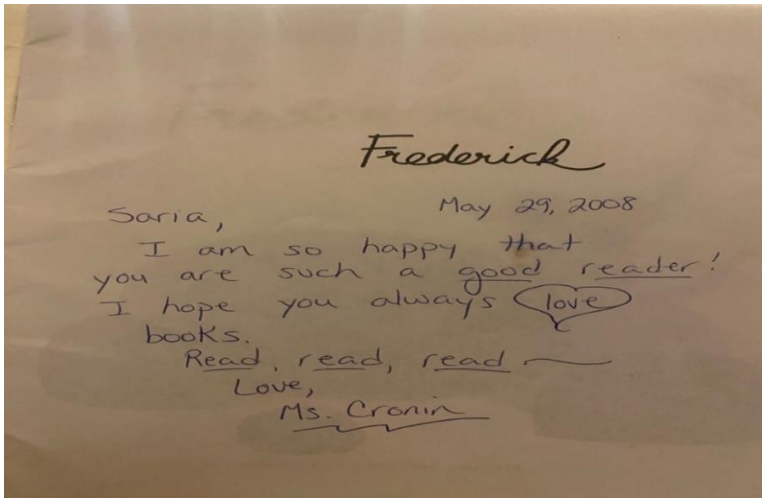

To Ms. Cronin,
My second-grade teacher at Henry Ford Elementary School in Dearborn, Michigan

Eighteen years ago, you wrote a simple note inside one of my favorite books—Frederick by Leo Lionni. I've cherished that note ever since.

You didn't just teach me to read; you taught me to love it. The way Frederick gathered words and colors to bring warmth during winter stayed with me, just as your kindness and encouragement did. You recognized a light in me when I was still learning to find my voice. With your warmth, gentle words, and unwavering faith, you helped that light grow.

In your classroom, I learned more than decoding words, I learned to feel wonder, imagine, and dream. The love for reading you nurtured became the foundation of my journey. Every late night of writing, every chapter I composed, every reference in this thesis echoes the joy of learning you gave me all those years ago.

This work is for you, Ms. Cronin, because the person I've become started in your classroom, with a book and a note from a teacher who believed in me.

Your student, who loves you dearly,
Saria Shatila

CHAPTER 1

INTRODUCTION

Reading comprehension is a valued skill worldwide (Beerwinkle & McKeown, 2021). It is a multifaceted complex task that entails extracting and making meaning from the text through interaction and engagement (Snow, 2010). It is influenced by several factors related to the text difficulty, the reader, and the task itself (Snow, 2010). Reading comprehension is categorized into many levels, mainly literal and higher order: Literal comprehension is understanding ideas explicitly stated in the text, like following instructions and recognizing cause and effect relationships (Roe & Smith, 2011). It relies heavily on memory (Fajardo et al., 2014). Hence, it is usually tested through questions that require recalling information stated in the text (Beerwinkle & McKeown, 2021).

On the other hand, higher order reading comprehension entails making inferences, connecting different sections of the text, interpreting pronoun and adverb references, discerning the text's mood or intent, and drawing logical conclusions based on textual evidence as well as critical evaluation of what is read. This type of comprehension relies on deep cognitive processing that requires connecting previous knowledge to the text (Beerwinkle & McKeown, 2021; Potocki et al., 2017).

Reading comprehension has become a vital skill not only for academic success but also for meaningful participation in society. This is especially true for learners in the context of English as a Foreign Language (EFL) where reading proficiency has become important with English being the lingua franca and the medium of for instruction and communication in higher education and professional developments on an international level. Additionally, developing proficient reading skills is a vital goal in English as a

Foreign Language (EFL) instruction since this facilitates the acquisition of skills that are indispensable to function efficiently within many academic and professional environments where English is the medium of instruction (EMI) and communication.

This research views reading comprehension as a multifaceted and complex concept that is affected by several factors related to the reader, the text, and the context of reading.

Prior research has been limited to one or more of these factors. What remains limited is the number of studies that examine the joint impact of several factors (determinants) of comprehension, especially on higher-order reading comprehension. These determinants do not operate on their own but in complex and varying ways that affect the student's reading experience and learning outcomes.

In this study, we aim to examine the interplay between meta-cognitive strategies reading anxiety, motivation to read and participants ' comprehension of informational texts.

This study addresses the following research questions:

1. To what extent do college readers use support, problem-solving, and global metacognitive reading strategies?
2. What role do metacognitive reading strategies play in the comprehension of informational texts at the college level?
3. How does reading motivation affect the comprehension of informational texts at the college level?
4. What is the impact of reading anxiety on the comprehension of informational texts at the college level?

Definition of Variables

- Metacognitive Reading Strategies

  These refer to the conscious, strategic actions readers take before, during, and after reading to plan, monitor, and evaluate their comprehension. They include global, problem-solving, and support strategies (Mokhtari & Reichard, 2002).

- Reading Anxiety

  Reading anxiety refers to the feelings of tension, worry, or apprehension that learners experience when engaging with English texts, which may hinder processing and comprehension (Saito, Horwitz, & Garza, 1999; Grabe & Stoller, 2013).

- Reading Motivation

  Reading motivation encompasses the internal and external factors that stimulate and sustain learners' desire to read, including intrinsic interest, perceived value of reading, and self-efficacy related to reading tasks (Ghaith & Harkous, 2024). .

- Literal Comprehension

  Literal comprehension involves understanding explicitly stated information in a text, such as details, facts, and sequences (Anderson & Pearson, 1988).

- Higher-Order Comprehension

  Higher-order comprehension refers to the ability to analyze, infer, evaluate, and integrate information that is not directly stated, requiring deeper cognitive engagement with the text (Ghaith & El-Sanyoura, 2019).

Rationale and Significance of the Study

Reading comprehension in EFL contexts is a complex process influenced by the interaction of both Cognitive and Affective factors. While literal comprehension reflects

learners' ability to extract surface-level information from texts, higher-order comprehension requires deeper cognitive processing like inference-making, and strategic regulation of understanding (Snow, 2010; Grabe & Stoller, 2013). Previous research has demonstrated that metacognitive reading strategies play a very important role in reading comprehension, specifically for higher-order reading comprehension (Aghaie & Zhang, 2012; Ghaith & El-Sanyoura, 2019).

At the same time, affective variables such as reading motivation and reading anxiety significantly shape learners' engagement and performance in EFL reading tasks. Motivated readers are more likely to persist, apply effective strategies, and achieve higher comprehension outcomes (Meniado, 2016; Wigfield et al., 2016), On the other hand, reading anxiety has been shown to interfere with processing efficiency and comprehension, especially at the literal level (Saito et al., 1999; Eysenck et al., 2007). Despite extensive research on reading strategies, motivation, and anxiety independently, fewer studies have examined how both affective and cognitive factors interact together to shape literal and higher-order comprehension in EFL contexts. Addressing this gap is essential for developing instructional practices that support both surface-level understanding and deeper comprehension. Therefore, this study contributes to the literature by clarifying the role of both cognitive factors and affective factors in shaping reading comprehsnion outcomes at both levels.

CHAPTER 2

THEORETICAL FRAMEWORK

To better understand Reading comprehension in EFL, both internal and external factors, such as metacognitive reading strategies, anxiety, and motivation, ought to be considered. Hence, this study is guided by four main theoretical frameworks that account for EFL learners' processing and understanding of informational texts. These theories are the Schema Theory, Strategic Reading Model framework, the Expectancy-Value Theory of Motivation, and the Foreign Language Anxiety Theory.

Schema theory, a cognitive framework developed by Anderson and Pearson in 1988, describes how knowledge is organized and used. Mental structures in this framework are considered necessary in guiding perception, memory, and the learning process (Anderson, & Pearson, 1988). Hence, this theory aligns with the view of reading comprehension as an interactive process between the reader and the text since reading comprehension is highly affected by the reader's existing knowledge structures, known as schemas (Che, 2014). In reading comprehension, three main schemata involved are: Language schema, formal schema, and content schema. Language schema refers to knowledge of the language of the text, including vocabulary, grammar, and syntax. It helps decode text and understand the literal meanings of words and sentences. Formal structures are knowledge about the structure and organization of the text. It helps in predicting the flow and in organizing the text mentally, and lastly, the content schema is prior knowledge about the content within the text. It aids in making sense of new information within the text by connecting information to previous knowledge (Hu, 2011; Che, 2014). In literal comprehension, Schema theory significantly plays a role by emphasizing the role of pre-existing knowledge structures, or schemata, in

understanding texts. Effective activation and use of these schemas to grasp explicit details such as facts, sequences, and cause-and-effect relationships highly impacts reading comprehension, making the process more interactive and meaningful (Che, 2014).

Moreover, higher-level also rely on activating schemas that help readers to infer, integrate, and synthesize information. Prior knowledge and experiences significantly influence higher-level comprehension by giving a framework for comprehending new information, facilitating inferences, and reducing cognitive load. These effects are mediated and supported by specific neural processes and have important implications for educational practices and curriculum design through direct and indirect processes.

The Expectancy theory of motivation, developed by Eccles and Wigfield in 2000, is a framework that states how motivation and academic outcomes are influenced by how much students believe they can succeed in the writing task (expectancy) and how much they think the reading task is important (value). It is composed of *Expectancy, beliefs, Value Beliefs, and Costs.*

Expectancy is composed of two key components: self-concept and perceived competence. Students' beliefs in their ability to read successfully highly impact performance. It has been shown that a higher self-concept was associated with higher motivation and better academic outcomes (Geng et al., 2023).

Moreover, perceived competence is a critical predictor of reading comprehension as students who believe they are competent readers are more likely to engage in tasks and hence perform better than those who don’t (Cartwright, Marshall, Wray, 2016).

Value Beliefs are composed of Intrinsic values, attainment values, and Utility Value. Students who value reading, also known as having intrinsic value, are interested in and find joy in reading (Geng, Lu, & Shu, 2023). Moreover, attainment value is the importance students put on reading comprehension, and more specifically, students who see reading as part of their identity or personal goals. (Geng, Lu, & Shu, 2023). While Utility is the perceived usefulness of reading (i.e., how they see reading as being useful for achieving future goals). Having high value beliefs, attainment values, and utility has been shown to lead to better outcomes. Lastly, Cost, the perceived time and effort a reading task may take, may also impact reading comprehension. Lower perceived cost is associated with higher reading comprehension (Barron & Hulleman, 2015). The expectancy theory of motivation provides a rigid framework for understanding and enhancing reading comprehension. The interaction between expectancy and value, along with how much students read and use strategies, highlights the complexity of reading motivation and the need for reading approaches in educational settings.

While motivation is considered important, it does not guarantee successful second-language reading comprehension, which brings us to an important framework: the FLRA framework. Foreign language reading anxiety is a specific type of anxiety that affects how students comprehend texts. While different from general language anxiety, FLRA is related to it (Wu, 2011). Both Personal Factors and Text Features affect FLRA. Personal Factors relate to the fear students have of making any errors, reading effects, and general anxiety they may have on learning a new and foreign language to them (Al-Shboul, Nordin, Rahman, Burhan, & Madarsha, 2013). Moreover, sometimes the text features themselves can affect FLRA as unfamiliar vocabulary, structure of sentence, cultural differences, and unfamiliar topics can be a cause of FLRA

(Al-Shboul, et.al, 2013).To assess this, Horwitz and Cope in 1986 developed the FRLA framework and a tool known as the Foreign Language Classroom Anxiety Scale-Appendix 2 (FLCAS) to assess students' anxiety when learning a new language. Key components of this framework are as follows: *Comprehension, Apprehension, Test Anxiety, and Fear of Negative Evaluation.* Comprehension apprehension refers to when students fear speaking in a foreign language because they tend to fear making mistakes, and they lack confidence in the foreign language (Amengual-Pizarro, 2018). Test anxiety, which is exacerbated by fear of negative evaluation, occurs when students worry about not doing well in language assessments (Amengual-Pizarro, 2018). Lastly, fear of negative evaluation is fearing being judged by others, which can impact both speaking and test performance (Amengual-Pizarro, 2018). This is important for this study, as anxiety may have a direct influence on metacognitive strategies and reading success in EFL learning.

The Strategic Reading Model framework, developed by Grabe and Stoller in 2013, sheds light on the importance of reading strategies in enhancing reading comprehension among students. Strategies such as prediction, goal-setting, and inference are highly emphasized in this framework (Babapour, Ahangari, & Ahour, 2019). These strategies are important for EFL students' understanding of texts, especially when facing reading obstacles. The model also stresses the importance of being metacognitively aware, i.e., recognizing when comprehension is not working and applying strategies to it. Based on this model, this awareness is essential to develop literal and higher-order reading comprehension, as it helps readers change how they approach reading and interact actively with the text.

These frameworks collectively shape a comprehensive understanding of both cognitive and emotional factors that affect EFL reading comprehension. By utilizing Schema Theory, Expectancy-Value Theory, the Theory of Foreign Language Anxiety, and the Strategic Reading Model, this study investigates how metacognitive strategies, motivation, and anxiety interact collaboratively in shaping reading comprehension outcomes. Valuable insights will be offered into how university-level EFL learners understand and comprehend texts, contributing to a deeper understanding of the factors that affect their ability to engage with texts in a second language.

CHAPTER 3

LITERATURE REVIEW

The relationship between reading strategies and reading comprehension is multifaceted as it involves various cognitive and metacognitive approaches (Yang, 2006). Pilonieta (2010) describes these strategies as “conscious, deliberate, and flexible plans readers use and adjust with different texts to meet specific goals” (p. 152). Trehearne (2015) defines them as “conscious plans–sets of steps that good readers follow to understand text when reading” (p. 446). Similarly, El-Koumy (2016) notes that “reading strategies are conscious procedures that help readers comprehend what they read and fix breakdowns in understanding” (p. 95)

Second language reading strategy instruction is a teaching approach used in reading courses tailored to each student’s needs. Researchers have put effort into classifying these strategies , Sheorey and Mokhtari (2001) suggested a taxonomy and divided these strategies into support, and problem-solving metacognitive strategies and global reading metacognitive strategies. Numerous studies have shown a positive link between the use of metacognitive strategies, especially global and problem-solving strategies, and EFL reading comprehension across different international and sociolinguistic settings (e.g., Aghaei & Zhang, 2012; Al-Sobhani, Kerbalaee Kamran, 2013; Madhumathi & Ghosh, 2012; Meniado, 2016; Shang, 2017; Zare, 2013).

To reach a clear purpose, the global reading approaches help students by increasing target vocabulary and seeking additional information per specific topic (Ali & Razali, 2019; Mokhtari & Reichard, 2002). Although strategies are moderately used, (Ghaith, 2020), Mokhtari and Reichard (2002) stressed that global strategies let the

readers get ready by setting a purpose for 1) reading, 2) previewing content, 3) skimming, 4) making predictions, and 5) activating prior knowledge. These strategies allow learners to examine their understanding constantly while making interpretations from the text (Sheorey & Mokhtari, 2001).

When readers face comprehension difficulties, problem-solving tactics are typically needed and considered the most used strategies among them. These tools might include 1) rereading difficult passages, 2) modifying reading speed, and 3) using context clues to infer the meanings of unknown words (Sheorey & Mokhtari, 2001; Ghaith & Al-Sanyoura, 2019). Students often rely on problem-solving strategies to improve comprehension and maintain essential information (Ghaith, 2020; Shang, 2017). Studies have shown that these strategies strongly predict both literal and higher-order reading comprehension (Ghaith & El-Sanyoura, 2019), making them particularly beneficial for learners who need additional support to understand complex writings (Shen, 2014).

Support reading methods include the use of external means or specific practices that enhances the understanding during the reading process (Ghaith & Al-Sanyoura, 2019). Examples include taking notes on a side of a passage, underlining or highlighting the key information, translating the difficult sections, or looking up reference sources such as dictionaries or glossaries (Sheorey & Mokhtari, 2001). These strategies serve as instructional scaffolds that can help learners clarify meanings, organize information, and remember key ideas for deeper comprehension. As such, support strategies complement both global and problem-solving strategies and promote sustained comprehension, especially for students who require reinforcement while processing text.

Impact of Reading Strategies on Comprehension Outcomes

Researchers note a shift in how teachers perceive and teach reading comprehension: formerly, the focus was on the content ("what") and less on the process ("how"). However, nowadays, critical reading strategies are important for improving reading comprehension as they help foster critical, evaluative, and reflective thinking of reading passages. Metacognitive reading strategies have been shown to positively impact reading comprehension outcomes among students. For instance, explicit instruction in these strategies has led to higher reading comprehension outcomes (Shokrpour, 2009). Moreover, Wichadee (2011) adds that students who are aware of these strategies and use them effectively tend to have higher reading outcomes and outperform students who don't use these strategies (Shokrpour, 2009).

Different types of metacognitive strategies such as support, global, and problem-solving strategies, are used by students. However, studies have shown that problem-solving strategies are the most effective ones for comprehension among university students (Hou, Schmorrow, & Fidopiastis, 2013).

Empirical Evidence from Reading Strategy Intervention StudiesIntervention studies generally showed a positive influence of using metacognitive reading strategies on reading comprehension. A study involving undergraduate Iranian students indicated that students who use reading strategies showed higher reading abilities (Anjomshoaa, 2012). Another study on Saudi EFL students showed awareness of these strategies was moderate; however, students who demonstrated awareness had higher reading comprehension capabilities compared to others who didn't (Al-khresheh & Al Basheer Ben Ali, 2023). Results showed that students who used the strategies more frequently demonstrated higher achievement and reading abilities. This highlights the importance

of explicit instruction. Aghaie and Zhang (2012) examined the impact of explicit strategy instruction on Iranian EFL learners. Results indicated that students who underwent specific training performed better in academic reading comprehension (Sheorey and Mokhtari, 2001). Bandivilai (2020) expanded this research with second-year English majors at Kasetsart University in Thailand. The results showed that reading strategies positively influenced their comprehension and described how students generally favored skimming, scanning, making predictions, and questioning, applying these techniques to enhance their understanding. Most recently, Ghaith and El Sanyoura (2019) explored which strategies effectively support comprehension. Their study of Lebanese 10th-grade EFL learners found that problem-solving strategies strongly predict both literal and higher-order understanding, equipping students to handle complex texts and perform critical analysis. Overall, these studies highlight the critical role of explicit strategy instruction in boosting EFL reading comprehension, with targeted training leading to successful outcomes in diverse settings.

Motivation and Reading Comprehension

Motivation as a Multidimensional Construct

Motivation plays a crucial role in determining how well students comprehend and engage with texts. Motivation is one of the many constructs involved in predicting reading comprehension outcomes among ELs, and by far determines a prominent part (Wigfield et al., 2016). Scholars agree that reading proficiency and motivation to read play a pivotal role in students' academic achievement at all levels of schooling, particularly the tertiary level. In college, students are expected to be effective and efficient in locating, summarizing, synthesizing, analyzing, and critiquing information from multiple sources and various text types (Ghaith & Harkous, 2024)., Studies have shown that while higher

motivation results in better course grades and success, low motivation to read creates reading challenges (Talwar et al., 2023).

Schutte and Malouff (2007) identified the following four dimensions of adult reading motivation: reading as part of the self, reading efficacy, reading for recognition, and reading to do well in other realms. The dimension of reading as part of the self considers reading as an important activity and a part of one's identity that defines the persona of a reader. Similarly, the reading efficacy dimension signifies a sense of ability to meet reading challenges and understand difficult texts despite unfamiliar vocabulary. According to the self-determination theory of Deci and Ryan (1985), supportive environments and positive teacher-student relationships increase motivation as learners feel autonomous and competent. Meanwhile, Eccles et al. (1983) expectancy-value theory argues that individuals are motivated when they both expect to succeed and see value in the tasks they are pursuing. Along similar lines, Pintrich and Schunk (1996) maintain that students' achievement goals, attributions, self-efficacy, and their value of reading beliefs contribute to motivation. Internal motivation such as student interest, curiosity, and inherited affection for reading as well as external motivation like prizes other than books, acknowledgment, or the desire to achieve a certain trophy (goal) have been found to influence student engagement, persistence, and willingness to exert effort when reading (Guthrie et al., 2007). Therefore, it can be said that highly motivated students are more inclined to read with a purpose both in reading and other activitiesnot having the "goal" of just getting done but truly engaging themselves as they approach all forms of text whose automatic tasks tend towards prescribed strategies rather than investigative and focus from start-to-finish. Therefore, resulting in good comprehension results. According to Schutte and Malouff (2007), the dimensions of adult reading motivation assume that

adult readers may be influenced by intrinsic motivation and self-regulation more than by rewards and extrinsic motivation.

Fostering Motivation through Supportive Learning Environments

Building on the idea that motivation influences reading behaviors, creating a supportive classroom environment can significantly enhance learners' intrinsic motivation to engage with reading tasks. Creating a positive learning environment that encourages learners might promote their motivation toward reading specific content (Wentzel, 2009). The climate of the classroom that supports autonomy, is rich in interesting reading materials for student choice, and takes many chances will also support intrinsic motivation (which exists when students are motivated to learn just because they desire knowledge or skill) (Gambrell,2011). Finally, positive teacher-student relationships have also been associated with heightened reading motivation through relatedness and emotional support (Wentzel, 2009). When learning communities are seen as valuable, respectful, and associated closely with teachers and peers, they will engage more actively in their reading tasks.

Practical Implications for Fostering Motivation in EFL Reading Instruction

To translate the theoretical understanding of motivation into practice, educators need to implement strategies that actively foster motivation in EFL learners. Indeed, to foster motivation in EFL reading instruction, researchers propose that educators explore a variety of research-based strategies derived from theory and empirical work. Learners need both choice and control over reading materials, a non-threatening classroom environment where mistakes become opportunities for learning rather than occasions of embarrassment or failure, and attainable but challenging goals with support when necessary Academic Achievement in Reading and relevance to the value of these

behaviors if such practices are going to enhance learner intrinsic motivation as well what it means success. Moreover, engaging students in shared and interactive reading activities while giving feedback can bolster motivation as well as improve comprehension by addressing relatedness and competence needs (Wigfield et al., 2008).

In addition, if educators integrate technology and multimedia resources explicitly into reading instruction, learners' motivation could motivate their comprehension (Huang 2013). For instance, reading electronically with the aid of e-books available in online reader platforms or applications is more significant to the type of digital literacy skills increasingly required in today's academic and professional workplaces optimizing both learners' motivation towards reading their level of comprehension as well

Reading Anxiety and Comprehension

Conceptualizing Reading Anxiety Among EFL Learners

Given the complex cognitive processes involved in reading comprehension, anxiety can significantly hinder EFL learners' ability to engage with and understand texts. Reading anxiety, which Saito et al. (1999) described as our apprehension, fear, or unease induced when performing a reading task, is regarded largely as one of the most influential emotional elements in terms of EFL learners' comprehension processes and results. Foreign language reading anxiety (FLRA) has been recognized as a distinct phenomenon that may hurt foreign language readers' metacognitive processing and comprehension (Saito, Garza & Horwitz, 1999) Specifically, Saito et al. (1999) argued that, although reading would seem at first glance to be the "least susceptible to anxiety effects" given that it involves more opportunities than listening and speaking for reflection and reconsideration, foreign language reading still elicits anxiety due to "unfamiliar script and writing system" as well as "unfamiliar cultural materials" (pp. 202- 203). The reasons are various: exposure to cultural materials above their level of understanding due to limited

knowledge, fear or reluctance to make mistakes and being judged by the teacher/classmates, feeling that reading a specific text may be too complicated/advanced for them as readers; past negative experiences with written texts can also affect students' feelings (Rajab et al., 2012) all these aspects should not remain ignored. Therefore, both the complex nature of reading anxiety and its potential sources should be understood, especially to help in providing strategies that can minimize these negative impacts on EFL learners' comprehension processing.

Influence of Anxiety Levels on Engagement, Cognitive Processes, and Comprehension

High anxiety and stress levels during reading can negatively affect engagement and comprehension (Sellers, 2000; Eysenck et al., 2007). Instructional scaffolding and building learner confidence, as suggested by Grabe & Stoller (2013), may help mitigate these effects. In case anxious readers lose themselves in self-doubt, worry, and negative rumination, cognitive resources are misallocated to stressors rather than being used to support comprehension and processing strategies (Sellers 2000). Moreover, anxiety can lead to restricted attention and inability for learners to keep their focus on the task at hand, which would reflect negatively on receiving information (Eysenck et al., 2007).

On the other hand, lower reading-anxious learners tend to be more engaged, persistent, and willing to work hard at completing a task that involves reading L2 for them to understand what they are comprehending (Grabe & Stoller, 2013). By reducing the cognitive disruption caused by anxiety, they can concentrate more and use their attentional resources during reading, with benefits for both comprehension (knowledge activation) as well as text retention.

Strategies for Mitigating Reading Anxiety and Promoting a Positive Learning Environment

Different strategies can be used to deal with reading anxiety in EFL situations to create a supportive environment. One strategy is to promote risk-taking in the classroom and normalize mistakes as a part of learning rather than failure or embarrassment (Rajab et al., 2012). If educators can reframe errors as moments to learn and grow, we may lessen the fear of making mistakes during reading tasks.

Finally, rather than overwhelming them with texts that may be too difficult, which could discourage engagement (Grabe and Stoller 2013). Providing scaffolding to the reading experience and offering appropriate support builds self-confidence in their understanding of texts, which creates success expectancy of performing without anxiety regarding text engagement.

There may be a benefit to offering learners an outlet for them to talk about their worries and comment on what life has been like in a safe environment where they discuss this as groups (Rajab et al., 2012), as it can get these feelings out of the way and create mutual understanding among peers. Relaxation techniques and encouraging positive self-talk may support learners during reading tasks (e.g., Huang, 2012). In addition, discussing reading content with peers or setting up communal readings may promote mutual experience and reduce the anomie produced by their symptoms of reading anxiety (Huang 2012). When learners collaborate and help each other out, they can experience less stress when it comes to performance on an individual basis, which contributes to creating a healthy learning ecosystem.

Interaction between Variables

Examining Interactions between Reader-Related Factors

Reading strategies, motivation, and anxiety are three factors that have been widely investigated in relation to L2R well-being. This is because these variables do not function in a vacuum; instead, they affect and are affected by one another to create dynamic interactions that help define the reading process (Grabe & Stoller 2013).

Motivated readers who have good strategic control, for example, may still read anxiously, which can interfere with comprehension (Sellers: 2000). Even the strongest motivation to use these strategies cannot save an anxious learner, as cognitive interference from anxiety will hinder effective strategy selection and overall processing. Simply lacking anxiety is not enough if learners do not have access to strategies that enable them to understand well (Grabe & Stoller 2013). The impact of motivation on comprehension may also be influenced by learners' strategy use and anxiety levels. Learners who are more motivated but do not use optimal strategies or manage their anxiety well may still achieve significant gains in understanding that high motivation alone might otherwise provide (Guthrie et al., 2007).

Potential Synergies and Complexities in the Relationship between Variables

Synergistic effects and complexities originate from the interaction of reader-related variables. Moreover, when factors like high motivation, effective strategy application, and low anxiety levels reinforce each other, additional positive synergies may emerge, leading to better comprehension outcomes. Synergistic effects and complexities originate from the interaction of reader-related variables, especially reading strategies, motivation, and reading anxiety. New research shows that these factors rarely operate independently; instead, they affect one another. Few studies demonstrate that motivated

learners tend to rely more on effective metacognitive reading strategies, which in turn reduces anxiety and improves comprehension (Meniado, 2016; Mokhtari & Reichard, 2002). On the other hand, high reading anxiety has been shown to affect with strategic processing and limit cognitive resources (Sellers, 2000) When these factors reinforce each other (high motivation, effective strategy application, and low anxiety), positive synergies emerge, leading to more literal and higher levels of understanding. For example, a student who is highly motivated, with strong meta-insights and relatively low anxiety is more likely to read attentively, monitor comprehension, and make deeper meaning, benefiting from the combined influence of these reader-related variables, as recent studies show.

However, complications also arise when certain factors interact in ways that disrupt or cancel out each effect. For instance, highly motivated readers who experience high test or text anxiety might struggle to understand a text because their emotions can impair their reading strategies and cognitive processing (Sellers, 2000).

Second, another group of readers might find comprehension challenging because low anxiety alone does not automatically lead to proper use or a deep understanding of strategies (Grabe & Stoller, 2013). In these cases, it's not so much that the benefits of low anxiety cancel out as there simply aren't helpful reading strategies available to address comprehension issues.

The literature review highlights the impact of reading strategies, motivation, and anxiety on reading comprehension in English as a Foreign Language (EFL) context. Research indicates that strategic reading encompassing cognitive, support, and global strategies substantially improves both literal and higher-order comprehension skills. Additionally, motivation, especially intrinsic motivation and a positive learning

environment, plays a crucial role in increasing engagement and enhancing understanding. Conversely, reading anxiety is frequently recognized as a significant obstacle, adversely affecting cognitive processing and overall reading performance.

CHAPTER 4

METHODOLOGY

Research Design

To better understand the role of metacognitive reading strategies, reading motivation, and reading anxiety on EFL reading comprehension, this study used a correlational, quantitative research design. This study further aimed to investigate the relationship among these factors in a low socioeconomic student population.

Participants

The study participants were one hundred seventy six (n = 176) undergraduate students enrolled in the higher education scholarship program (HES), funded by the USAID at the American University of Beirut. They were all between the ages of 18-22 years, of different genders, various academic majors, and socioeconomic backgrounds They were not all at the same level (i.e., some were freshmen, sophomores, juniors, or even seniors).

This sample shows multilingual and socioeconomic diversity. The participants represent both English- and French-educated students, including those from private and public schools. Many were from deprived and underprivileged backgrounds, both Lebanese citizens and refugee students (Syrians and Palestinians). The heterogeneous composition of the cohort facilitated a robust examination of reading activities and achievement in English as a Foreign Language (EFL) within an intricate sociolinguistic EFL environment.

It was voluntary to participate in the study. Approval of the Institutional Review Board (IRB) had been secured for data collection, and all participants gave their

informed consent as recommended by ethical research guidelines. For privacy reasons, the information was collected anonymously.

Data were gathered online through LimeSurvey, an anonymous and confidential university-approved platform for surveys at AUB during the Spring semester. All participants completed three surveys and a reading comprehension task.

Data Collection Tools

The study used four instruments- three surveys and a reading comprehension test.

The first instrument was the Survey of Reading Strategies (SORS)-Appendix 3 designed by Mokhtari and Sheorey (2002), which assesses students' metacognitive awareness about reading strategies in academic settings. The SORS includes 30 items classified into three subscales: global strategies, problem-solving, and support. Responses were made on a five-point Likert scale ranging from 'always use' (5) to 'never used' (1), and participants marked how often they employed that strategy when reading English. Reliability of the scale The Cronbach's alpha value for internal consistency in this study was. 887 for global strategies. 871 for problem solving strategies, and. 863 for coping methods; this demonstrates that the scale is reliable in a sample population.

The second instrument was the Adult Reading Motivation Scale (ARMS)-Appendix 1, a 19-item scale created to measure both intrinsic and extrinsic aspects of reading motivation. Items were rated on a 5-point scale (1 = strongly disagree to 5 = strongly agree). Used extensively in language learning and literacy research, this instrument demonstrated strong internal consistency within the current study (Cronbach's &.) 899. It offered critical information about learners' orientations to the motivation of reading academic English.

For the measurement of affective factors related to reading, we used a third instrument: FLRAS (Foreign Language Reading Anxiety Scale)-Appendix 2, which includes 20 items regarding emotional and psychological aspects in relation to foreign language readings. Products measured anxiety of symptomatology (e.g., worry, nervousness, and avoidance). This scale was rated on a five-point Likert scale, and it achieved high reliability in this sample, with an alpha of. 860. Its addition allowed for an examination of the relationship between reading anxiety, strategy use, and comprehension achievement.

The reading skill subtest- Appendix 4 was a researcher-made test of higher-level reading skills. The test included several academic passages, together with comprehension questions aimed at inferential, analytical and evaluative levels of understanding according to Bloom's taxonomy/ EFL curriculum objectives for reading in AUB. The test items were derived from existing language assessment resources and reviewed by content experts to confirm face validity with the cognitive skills involved in university-level reading. This is in contrast to previous research, which has had difficulty finding links between strategy use and affective variables that are claimed to be related to comprehension.

Data Analysis

All data processing was done by IBM SPSS version 27 through a systematic, multi-phase method. Preliminary data cleaning steps verified the dataset's integrity and completeness, with no missing or outlier responses to be excluded. Descriptive statistics were used to analyze the distribution, central tendency, and variability of scores for each main figure, including global support, and problem-solving strategies. In addition to affective factors such as reading motivation and reading anxiety. This exploratory

examination presented an initial summary of the self-reported behavior, attitudes, and observed performance on the comprehension task by participants.

Afterward, we assessed the internal consistency of reliability for all length-scale instruments through Cronbach's alpha coefficients. All instruments showed high reliability (α from. 860 to. 89), ensuring a high degree of consistency between items and constructs. These results demonstrated that the psychometric was valid and supported by the application of these tools in further inferential analysis.

Analysis for Research Question 1

To what extent do college readers use support, problem-solving, and global metacognitive reading strategies?

Measures of central tendency and variability, including the minimum, maximum, median, and mean rank order, were calculated for all three strategies- global, support, and problem-solving strategies. These descriptive indicators allowed for comparing the relative frequency with which each strategy type was reported.

Analysis for Research Question 2

What role do metacognitive reading strategies play in the comprehension of informational texts at the college level?

Multiple linear regression analyses were computed to determine the metacognitive reading strategy's predictive role on students' comprehension performance. Separate regression models were done for both literal comprehension and higher-order comprehension as outcome variables, while global support and problem-solving strategies were entered as predictors. The Durbin–Watson statistic was examined to verify the independence of errors. Regression coefficients explained variance (R^2), and significance levels were used to determine the contribution of each strategy.

Analysis for Research Question 3

How does reading motivation affect the comprehension of informational texts at the college level?

Reading motivation was as a predictor within the broader regression models. Multiple linear regression was used to find out whether motivation significantly predicted literal and higher-order comprehension after accounting for metacognitive reading strategies and reading anxiety. Motivation was entered into the regression equation alongside the strategy variables and anxiety to assess its unique contribution to comprehension. The significance of the standardized beta coefficients and the variance explained were used to interpret its effect.

Analysis for Research Question 4

What is the impact of reading anxiety on the comprehension of informational texts at the college level?

Similarly to the multiple linear regression models described above, the impact of reading anxiety on comprehension was assessed. Anxiety was included as an independent predictor of both literal and higher-order comprehension. Its influence was evaluated through the significance of its regression coefficients, as well as its impact to the overall explained variance in the models.

Collinearity diagnostics (variance inflation factors [VIFs] and tolerance values) were considered to determine whether multicollinearity affected the regression outcomes. All VIFs were well below the threshold (5) of collinearity, and residual plots suggested that linearity, normality, and homoscedasticity assumptions were satisfied. The Durbin-Watson statistic was consistent with the independence of residuals, suggesting that inferences based upon regression were valid.

This fine-grained analytic procedure allowed the researchers to determine which components were major predictors of higher-order reading comprehension, and they could then begin to disentangle relationships among strategy use, motivation (and/or anxiety), and performance in reading. Pedagogical implications and recommendations for instruction practice in EFL academic context were also based on statistical results.

CHAPTER 5

RESULTS

The results of the analysis addressing question 1 concerning frequency of the reported use metacognitive strategies are shown in Table 1 Below:

Table 1 presents the mean rank order of metacognitive reading strategy to use. As shown, students reported using global strategies most frequently (Mean Rank = 46.07, Median = 4.00), followed by support strategies (Mean Rank = 30.83, Median = 3.75) and problem-solving strategies (Mean Rank = 29.60, Median = 3.75).

Table 1

Mean Rank Order of Metacognitive Reading Strategy Use

Strategy	**N**	**Minimum**	**Maximum**	**Mean Rank**	**Median**
Global	176	13	46.07	1	4.00
Support	176	9	30.83	2	3.75
Problem Solving	176	8	29.60	3	3.75

The results indicate that Durbin-Watson statistics value (1.87) is within the acceptable range of 1.5 - 2.5 and that the model has acceptable independence of errors, indicating independence of observations and absence of intercorrelation problems. Additionally, the problem-solving strategy variable explained 11 % of the variance (R square = 0.11, F = 8.50 p <.01) and is statistically significant determinants of literal reading comprehension (β = 0.38, p < .05). In addition, Table 2 shows that the global

reading and support strategies did not predict literal reading comprehension β = -.29, p > .05, = .00, p > .05 respectively.

Table 2

The Regression Analysis Results of Reading Strategies and Literal Comprehension

Strategy	B	SEB	Beta (β)	t	p	Durbin–Watson
Problem Solving	0.67	0.24	0.38	2.86*	.00	1.87
Global	-0.00	0.19	-0.29	-0.18	.85	
Support	0.00	0.19	0.00	0.25	0.098	
R	0.36					
R^2	0.11					
F	8.50**					

*Significant at the 0.05 level
**Significant at the 0.01 level

Table 3 presents the regression analysis results of reading strategies and higher-order comprehension. The Durbin–Watson statistic (1.96) falls within the acceptable range of 1.5–2.5, indicating independence of errors and the absence of autocorrelation. The overall regression model was significant ($F = 17.23$, $p < .01$) and accounted for 23% of the variance in higher-order comprehension ($R^2 = 0.23$). Among the predictors, the problem-solving strategy emerged as the only significant determinant ($\beta = 0.47$, $p < .01$), indicating that students who actively use problem-solving strategies demonstrate stronger higher-order comprehension skills. In contrast, the global strategy ($\beta = 0.16$, $p = .27$) and the support strategy ($\beta = –0.20$, $p = .09$) did not significantly predict higher-order comprehension.

Table 3

Regression Analysis Results of Reading Strategies and Higher Order Comprehension

Strategies	***B***	**SEB**	***Beta (β)***	***t***	***p***	**Durbin-Watson**
		2.02				1.96
Global	0.16		2.76*	1.10	.27	
Problem Solving	0.47		.00	3.79**	.00	
Support	-0.20		.09	-1.69	.09	
R	0.48					
R square	0.23					
F	17.23**					

*Significant at the 0.05 level
**Significant at the 0.01 level

Table 4 presents the regression analysis results of reading strategies, motivation, and anxiety in predicting literal comprehension. The Durbin–Watson statistic (1.86) falls within the acceptable range of 1.5–2.5, indicating independence of errors and the absence of autocorrelation. The overall model was significant ($F = 6.02$, $p < .01$) and explained 15% of the variance in literal comprehension ($R^2 = .15$). Among the predictors, anxiety emerged as a significant determinant ($\beta = –0.14$, $p < .05$), indicating that higher anxiety levels were associated with lower literal comprehension performance. Additionally, the problem-solving strategy was a significant positive predictor ($\beta = .35$, $p < .01$), suggesting that students who use problem-solving strategies tend to demonstrate stronger literal comprehension skills. In contrast, motivation ($\beta = –.06$, $p = .41$), global strategy ($\beta = –.02$, $p = .90$), and support strategy ($\beta = .08$, $p = .51$) did not significantly predict literal comprehension.

Table 4

The Regression Analysis Results of Reading Strategies, Motivation, And Anxiety and Literal Comprehension

Variables	***B***	**SEB**	***Beta (β)***	***t***	***p***	**Durbin-Watson**
		.94				1.86
Anxiety	-.01		-.14	-0.19	.05*	
Motivation	-.00		-.06	-.81	.41	
Global	-.00		-.02	-.12	.90	
ProblemSolving	.06		.35	2.58**	.01**	
Support	.01		.08	.65	.51	
R	.39					
R square	.15					
F	6.02**					

*Significant at the 0.05 level
**Significant at the 0.01 level

Table 5 presents the regression analysis results of reading strategies, motivation, and anxiety in predicting higher-order comprehension. The overall model was statistically significant ($F = 11.04$, $p < .01$) and explained 24% of the variance in higher-order comprehension ($R^2 = .24$). Among the predictors, the problem-solving strategy emerged as the only significant determinant ($\beta = 0.45$, $p < .01$), indicating that students who rely more heavily on problem-solving strategies tend to demonstrate stronger higher-order comprehension skills. In contrast, anxiety ($\beta = –0.12$, $p = .09$), motivation ($\beta = –0.06$, $p = .40$), global strategy ($\beta = 0.17$, $p = .29$), and support strategy ($\beta = –0.13$, $p = .24$) did not significantly predict higher-order comprehension.

Table 5

Regression Analysis Results of Reading Strategies, Motivation, and Anxiety and Higher Order Comprehension

Predictor	**B**	***Beta (β)***	**t**	**p**
Constant	—	—	0.94	—
Anxiety	-0.25	-0.12	-1.67	.09
Motivation	-0.01	-0.06	-0.82	.40
Global	0.04	0.17	1.16	.29
Problem Solving	0.17	0.45	3.53	.00
Support	-0.04	-0.13	-1.05	.24
R	.49			
R square	.24			
F	11.04**			

*Significant at the 0.05 level
**Significant at the 0.01 level

CHAPTER 6

DISCUSSION

This chapter presents a comprehensive discussion of the study's findings, integrating the quantitative results with existing literature on metacognitive reading strategies, motivation, and reading anxiety in English as a Foreign Language (EFL) context. The discussion addresses how cognitive and affective factors interact to influence both literal and higher-order comprehension among undergraduate EFL learners.

Frequency of Metacognitive Strategy Use

Descriptive results (Table 1) showed that participants reported using global strategies (Mean Rank = 46.07; Median = 4.00), followed by support strategies (Mean Rank = 30.83; Median = 3.75) and problem-solving strategies (Mean Rank = 29.60; Median = 3.75). These results suggest that learners tend to rely more on global approaches,such as previewing and predictingwhen engaging with reading tasks, while support and problem-solving strategies are used to a slightly lesser extent.

This pattern is consistent with previous research identifying global techniques (previewing, predicting, and activating prior knowledge) as reported by EFL readers (Mokhtari & Sheorey, 2002). The frequent use of global techniques may indicate that learners rely on planning and orientation behaviors that are easier to apply across texts. At the same time, the comparatively lower mean rank for problem-solving strategies suggests that learners may not routinely deploy the targeted cognitive operations (e.g., clarifying, re-reading, inferring) that support deep processing, as noted by Ghaith & El-Sanyoura (2019) in Lebanese settings.

Predictive Role of Metacognitive Strategies

Regression analyses consistently identified problem-solving strategies as the primary predictor of comprehension:

- Literal comprehension (Table 2): Problem-solving predicted literal scores ($\beta = 0.38$, $p < .05$); the model explained $R^2 = 0.11$. Global ($\beta = –0.29$, $p = .85$) and support ($\beta = 0.00$, $p = .098$) strategies were not significant predictors.
- Higher-order comprehension (Table 3): Problem-solving predicted higher-order scores strongly ($\beta = 0.47$, $p < .01$); $R^2 = 0.23$. Global ($\beta = 0.16$, $p = .27$) and support ($\beta = –0.20$, $p = .09$) strategies were not significant.

These results align with intervention and correlational research indicating that targeted, problem-focused strategies support both literal and inferential processing (Aghaie & Zhang, 2012). They also mirror findings from Lebanese samples showing the mediating role of metacognitive strategies particularly problem-solvingon comprehension outcomes (Ghaith & El-Sanyoura, 2019). In sum, frequency of global strategy use does not necessarily translate to predictive power; it is students' active engagement in problem-solving operations that drives comprehension gains.

Role of Motivation

Motivation did not predict significantly literal ($\beta = –0.06$, $p = .41$) or higher-order comprehension ($\beta = –0.06$, $p = .40$) when affective variables were included (Tables 4 and 5). This result is consistent with research that suggests motivation plays a critical role in promoting reading engagement (Wigfield et al., 2008). Rather, it implies that motivation in isolation may be insufficient for comprehension unless coupled with effective strategy use. According to Guthrie et al. (2007) and recent data from a variety of EFL college cohorts, motivation interacts with strategy use and proficiency in

predicting achievement (Ghaith & Harkous, 2024). Motivation may, in practice, encourage a willingness to interact with texts, but understanding gains necessitate teaching that transforms motivation into the application of effective strategies.

Influence of Reading Anxiety

In the combined model, reading anxiety significantly predicted literal comprehension (Table 4: $\beta = -0.14$, $p < .05$; overall $R^2 = .15$), indicating that lower literal performance was associated with increased anxiety. Higher-order comprehension was negatively impacted by anxiety; however, this effect was not statistically significant (Table 5: $\beta = -0.12$, $p = .09$; $R^2 = .24$). These findings are in line with studies that demonstrate how anxiety can affect cognitive processing and attentional control (Sellers, 2000) as well as research on reading anxiety in foreign languages (Saito, Horwitz, & Garza, 1999). While higher-order taskswhen accompanied by problem-solving techniquesmay be partly protected from anxiety's detrimental effects, the bigger effect on literal comprehension may reflect anxiety's disturbance of basic decoding and immediate information retrieval.

Interaction of Cognitive and Affective Factors

The pattern of results supports a conditional, interactive perspective: problem-solving strategies consistently contributed the largest, most robust effects (β range $\approx$ 0.35–0.47 across models). At the same time, motivation and anxiety showed conditional and smaller effects. This accords with Grabe & Stoller's (2013) emphasis on the synergy between strategy use and affective factors and with empirical work demonstrating that strategy instruction often moderates the impact of motivation and anxiety on comprehension (Aghaie & Zhang, 2012; Ghaith & El-Sanyoura, 2019). Put differently, a highly motivated reader without problem-solving skills may not achieve

deep comprehension, and an anxious reader may still perform adequately if they possess strong problem-solving strategies.

CHAPTER 7

CONCLUSION

Theoretical Frameworks in Relation to Findings

This study demonstrates that problem-solving metacognitive strategies are the highest predictors of both literal and higher-order reading comprehension among EFL learners, while reading anxiety negatively affects literal comprehension, and reading motivation may influence comprehension indirectly if paired with strategy use. These findings provide empirical support for the Strategic Reading Model (Grabe & Stoller, 2013), highlighting the central role of active monitoring, inferencing, and regulation in successful comprehension. They also align with Schema Theory (Anderson & Pearson, 1988), as effective problem-solving strategies appear to facilitate the activation and integration of prior knowledge necessary for both surface-level and deeper comprehension. Furthermore, the detrimental impact of anxiety on literal comprehension supports the Foreign Language Reading Anxiety framework (Saito et al., 1999), suggesting that anxiety interferes with early stages of text processing. Finally, the results are consistent with Expectancy–Value Theory, indicating that motivation alone is not enough to enhance comprehension unless it translates into strategic engagement, as emphasized in prior research (Ghaith & Harkous, 2024). Overall, the findings underscore the importance of instructional approaches that integrate explicit strategy instruction with affective support to optimize EFL reading comprehension.

Future Research

Future studies should (a) implement longitudinal or experimental designs to test causal effects of strategy instruction and anxiety-reduction interventions; (b) use triangulated methods (think-aloud protocols, observational coding) to validate self-reported strategy use; (c) examine which instructional formats (collaborative reading, computer-assisted reading, explicit strategy lessons) most effectively translate motivation into strategy application; and (d) investigate differential effects across proficiency levels and text types.

Implications for Research and Practice

The findings point to three key instructional priorities in EFL reading pedagogy. First, explicit training in problem-solving strategies is essential. Given the strong predictive role of problem-solving strategies in comprehension ($\beta = 0.38–0.47$), EFL curricula should systematically model and scaffold techniques such as clarifying meaning, making inferences, re-reading, and monitoring comprehension (Aghaie & Zhang, 2012; Mokhtari & Sheorey, 2002).

Second, instructional practices should address affective factors, particularly reading anxiety. The negative effect of anxiety on literal comprehension ($\beta = –0.14$) suggests the need for low-stakes reading tasks, error-tolerant environments, and structured scaffolding to reduce cognitive load and anxiety during text processing (Saito et al., 1999; Grabe & Stoller, 2013).

Finally, strategy instruction should be integrated with motivational supports. Consistent with self-regulated learning perspectives, reading instruction is likely to be most effective when explicit strategy training is combined with motivational elements such as learner choice, relevance, and a sense of relatedness (Ghaith & Harkous, 2024).

Limitations of Study

Several constraints limit generalizability and interpretation. First, metacognitive techniques, motivation, and anxiety were assessed using self-reports, which can introduce social desirability and recall biases. Second, the sample's heterogeneity in prior language training and socioeconomic status may have introduced unmeasured variability. Third, the cross-sectional design limits making causal inferences regarding the direction of effects. Fourth, some subscales (such as motivation dimensions) may necessitate more fine-grained research to uncover relationships with strategy utilization.

APPENDIX 1

ADULT READING MOTIVATION SCALE

Class: _____
Indicate your gender: Male: ___ Female: ___
Age: ----------
Major: ----------
Please circle the number that indicates your level of agreement with the statements below:
If the statement is **strongly disagree**, circle number **1**
If the statement is **disagree,** circle number **2**
If the statement is **neither agree nor disagree,** circle number **3**
If the statement is **agree,** circle number **4**
If the statement is **strongly agree,** circle number **5**

Table 6

Adult Reading Motivation Scale

1. If a book or article is interesting, I don't care how hard it is to read	1	2	3	4	5
2. Without reading, my life would not be the same	1	2	3	4	5
3. My friends are sometimes surprised about how much I read	1	2	3	4	5
4. My friends and I like to exchange books or articles we particularly enjoy	1	2	3	4	5
5. It is very important to me to spend time reading	1	2	3	4	5
6. In comparison to other activities, reading is important to me.	1	2	3	4	5
7. If I am going to need information from material I read, I finish the reading well in advance of when I must know the material.	1	2	3	4	5
8. Work performance or university grades are an indicator of the effectiveness or my reading.	1	2	3	4	5
9. I set a good model for other through reading.	1	2	3	4	5
10. I read rapidly.	1	2	3	4	5
11. Reading helps make my life meaningful.	1	2	3	4	5

12. It is important to me to get compliments for the knowledge I gather reading.	1	2	3	4	5
13. I like others to question me on what I read so that I can show my knowledge.	1	2	3	4	5

14. I don’t like reading technical materials.	1	2	3	4	5
15. It is important to me to have others remark on how much I read.	1	2	3	4	5
16. I like hard, challenging, books or articles.	1	2	3	4	5
17. I don’t like reading material with difficult vocabulary.	1	2	3	4	5
18. I do all the expected reading for work or university courses.	1	2	3	4	5
19. I am confident I can understand difficult books or article	1	2	3	4	5
20. I am a good reader.	1	2	3	4	5
21. I read to improve my work or university performance,	1	2	3	4	5

APPENDIX 2

READING ANXIETY SCALE

Date _____ / _____ / _____
Class: _____
Indicate your gender: Male: ___ Female: ___
Age: ----------
Major: ----------
Please circle the number that indicates your level of agreement with the statements below:
If the statement is **strongly disagree**, circle number **1**
If the statement is **disagree,** circle number **2**
If the statement is **neither agree nor disagree,** circle number **3**
If the statement is **agree,** circle number **4**
If the statement is **strongly agree,** circle number **5**

Table 7

Reading Anxiety Scale

Statements	**1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strong Agree**				
1. I get upset when I'm not sure whether I understand what I am reading in English.	1	2	3	4	5
2. When reading English, I often understand the words but still can't quite understand what the author is saying.	1	2	3	4	5
3.When I'm reading English, I get so confused I can't remember what I'm reading.	1	2	3	4	5
4. I feel intimidated whenever I see a whole page of English in front of me.	1	2	3	4	5
5. I am nervous when I am reading a passage in English when I am not familiar with the topic.	1	2	3	4	5
6. I get upset whenever I encounter unknown grammar when reading English.	1	2	3	4	5
7. When reading English, I get nervous and confused when I don't understand every word.	1	2	3	4	5
8. It bothers me to encounter words I can't pronounce while reading English.	1	2	3	4	5
9. I usually end up translating word by word when I'm reading English.	1	2	3	4	5

10. By the time you get past the funny letters and symbols in English, it's hard to remember what you're reading about.	1	2	3	4	5
11. I am worried about all the new symbols I have to learn in order to read English.	1	2	3	4	5
12. I enjoy reading English.	1	2	3	4	5
13. I feel confident when I am reading in English.	1	2	3	4	5
14. Once you get used to it, reading English is not so difficult.	1	2	3	4	5
15. The hardest part of learning English is learning to read.	1	2	3	4	5
16. I would be happy just to learn to speak English rather than having to learn to read as well.	1	2	3	4	5
17. I don’t mind reading to myself, but I feel very uncomfortable when I have to read English aloud.	1	2	3	4	5
18. I am satisfied with the level of reading ability in English that I have achieved so far.	1	2	3	4	5
19. English culture and ideas seem very foreign to me.	1	2	3	4	5
20. You have to know so much about English history and culture in order to read English.	1	2	3	4	5

APPENDIX 3

TYPE STRATEGIES SCALE

DIRECTIONS: Listed below are statements about what people do when they read academic or school-
related materials such as textbooks, library books, etc. Five numbers follow each statement (1, 2, 3, 4, 5)
and each number means the following:
1 means "I never or almost never do this."
2 means "I do this only occasionally."
3 means "I sometimes do this." (About 50% of the time.)
4 means "I usually do this."
5 means "I always or almost always do this."
After reading each statement, circle the number (1, 2, 3, 4, or 5) that applies to you using the scale
provided. Please note that there are no right or wrong answers to the statements in this inventory.

GLOB 1. I have a purpose in mind when I read. 1 2 3 4 5
SUP 2. I take notes while reading to help me understand what I read. 1 2 3 4 5
GLOB 3. I think about what I know to help me understand what I read. 1 2 3 4 5
GLOB 4. I preview the text to see what it's about before reading it. 1 2 3 4 5
SUP 5. When text becomes difficult, I read aloud to help me understand what I read. 1 2 3 4 5
SUP 6.I summarize what I read to reflect on important information in the text. 1 2 3 4 5
GLOB 7. I think about whether the content of the text fits my reading purpose. 1 2 3 4 5
PROB 8. I read slowly but carefully to be sure I understand what I'm reading. 1 2 3 4 5
SUP 9.I discuss what I read with others to check my understanding. 1 2 3 4 5
GLOB 10. I skim the text first by noting characteristics like length and organization. 1 2 3 4 5
PROB 11. I try to get back on track when I lose concentration. 1 2 3 4 5
SUP 12. I underline or circle information in the text to help me remember it. 1 2 3 4 5
PROB 13. I adjust my reading speed according to what I'm reading. 1 2 3 4 5
GLOB 14. I decide what to read closely and what to ignore. 1 2 3 4 5
SUP 15. I use reference materials such as dictionaries to help me understand what I read. 1 2 3 4 5
PROB 16. When text becomes difficult, I pay closer attention to what I'm reading. 1 2 3 4 5
GLOB 17. I use tables, figures, and pictures in text to increase my understanding. 1 2 3 4 5
PROB 18. I stop from time to time and think about what I'm reading. 1 2 3 4 5
GLOB 19. I use context clues to help me better understand what I'm reading. 1 2 3 4 5
SUP 20. I paraphrase (restate ideas in my own words) to better understand what I read. 1 2 3 4 5
PROB 21. I try to picture or visualize information to help remember what I read. 1 2 3 4 5

GLOB 22. I use typographical aids like bold face and italics to identify key information. 1 2 3 4 5

GLOB 23. I critically analyze and evaluate the information presented in the text. 1 2 3 4 5

SUP 24. I go back and forth in the text to find relationships among ideas in it. 1 2 3 4 5

GLOB 25. I check my understanding when I come across conflicting information. 1 2 3 4 5

GLOB 26. I try to guess what the material is about when I read. 1 2 3 4 5

PROB 27. When text becomes difficult, I re-read to increase my understanding. 1 2 3 4 5

SUP 28. I ask myself questions I like to have answered in the text. 1 2 3 4 5

GLOB 29. I check to see if my guesses about the text are right or wrong. 1 2 3 4 5

PROB 30. I try to guess the meaning of unknown words or phrases. 1 2 3 4 5

Reference: Mokhtari, K., & Reichard, C. (2002). Assessing students' metacognitive awareness of reading strategies.

APPENDIX 4

READING COMPREHENSION TEST

Please answer questions based on following passage.

From the article "Against the Undertow: Language-Minority Education Policy and Politics in the 'Age of Accountability'" by Terrence G Wiley and Wayne E. Wright

Language diversity has always been part of the national demographic landscape of the United States. At the time of the first census in 1790, about 25% of the population spoke languages other than English (Lepore, 2002). Thus, there was a diverse pool of native speakers of other languages at the time of the founding of the republic. Today, nationwide, school districts have reported more than 400 languages spoken by language-minority students classified as limited English proficient (LEP) students (Kindler, 2002). Between 1991 and 2002, total K-12 student enrollment rose only 12%, whereas LEP student enrollment increased 95% during this same time period (National Clearinghouse for English Language Acquisition, 2002b). This rapid increase and changing demographics has intensified the long debate over the best way to educate language-minority students.

Historically, many groups attempted to maintain their native languages even as they learned English, and for a time, some were able to do so with relatively little resistance until a wave of xenophobia swept the country during World War 1 (Kloss, 1977/1998). Other groups, Africans, and Native Americans encountered repressive politics much earlier. During the 1960s, a more tolerant policy climate emerged. However, for the past two decades there has been a steady undertow of resistance to bilingualism and bilingual education. This article provides historical background and analyzes contemporary trends in language-minority education within the context of the recent national push for accountability, which typically takes the form of high-stakes testing. The origins of persistent themes regarding the popular antagonisms toward bilingual education and the prescribed panaceas of "English immersion" and high-stakes testing in English need to be scrutinized. As background to the contemporary context, we briefly discuss the history of language politics in the United States and the ideological underpinnings of the dominant monolingual English ideology. We analyze the recent attacks on bilingual education for what this attack represents for educational policy within a multilingual society such as the United States. We emphasize multilingual because most discussions of language policy are framed as if monolingualism were part of our heritage from which we are now drifting. Framing the language policy issues in this way masks both the historical and contemporary reality and positions non-English language diversity as an abnormality that must be cured. Contrary to the steady flow of disinformation, we begin with the premise that even as English has historically been the dominant language in the United States since the colonial era, language diversity has

always been a fact of life. Thus, efforts to deny that reality represent a "malady of mind" (Blaut, 1993) that has resulted in either restrictionist or repressive language policies for minorities.

As more states ponder imposing restrictions on languages of instruction other than English-as California, Arizona, and Massachusetts have recently done-it is useful to highlight several questions related to the history of language politics and language planning in the United States. Educational language planning is frequently portrayed as an attempt to solve the language problems of the minority. Nevertheless, the historical record indicates that schools have generally failed to meet the needs of language-minority students (Deschenes, Cuban, & Tyack, 2001) and that the endeavor to plan language behavior by forcing a rapid shift to English has often been a source of language problems that has resulted in the denial of language rights and hindered linguistic access to educational, social, economic, and political benefits even as the promoters of English immersion claim the opposite.

The dominance of English was established under the British during the colonial period, not by official decree but through language status achievement, that is, through "the legitimization of a government's decisions regarding acceptable language for those who are to carry out the political, economic, and social affairs of the political process" (Heath, 1976, p.51). English achieved dominance as a result of the political and socioeconomic trade between England and colonial administrators, colonists, and traders. Other languages coexisted with English in the colonies with notable exceptions. Enslaved Africans were prohibited from using their native tongues for fear that it would facilitate resistance or rebellion. From the 1740s forward, southern colonies simultaneously institutionalized "compulsory ignorance" laws that prohibited those enslaved from acquiring English literacy for similar reasons. These restrictive slave codes were carried forward as the former southern colonies became states of the newly United States and remained in force until the end of the Civil War in 1865 (Weinberg, 1977/1995). Thus, the very first formal language policies were restrictive with the explicit purpose of promoting social control.

1. What is the primary purpose of including the statistic from the 1790 census in the introductory paragraph? (Interpretive)

- A) To explain how colonizing the US eradicated language diversity
- B) To show concrete evidence that language diversity in the US is not a new phenomenon
- C) To note that before that time, there was no measure of language diversity in the US
- D) To demonstrate that census data can be inaccurate

2. The article compares two sets of statistics from the years 1991-2002, increases in K-12 enrollment and increases in LEP students, to highlight. (critical)

- A) That the two numbers, while often cited in research, are insignificant

B) That while many people with school-age children immigrated to the US during this time, an equal amount left the country as well

C) That language diversity had no impact on US student enrollment during this time

D) That while the total amount of students enrolled in US schools may have grown slowly, the amount of those students who were LEP increased dramatically

3. According to the second paragraph, many groups maintained their native languages without resistance into the 20th century EXCEPT (Literal)

A) Native Americans and African Americans

B) Irish Americans and African Americans

C) Mexican Americans and Native Americas

D) Native Americans and Dutch Americans

4. Why is the word "undertow" emphasized in the second paragraph?(Interpretive)

A) To explain how certain groups continued to carry their native languages with them despite the opposition from those against language diversity

B) To show the secretive and sneaky nature of those opposed to language diversity

C) To call attention to the ebb and flow of language resistance during the 20th century, experiencing periods of both rest and extremism

D) To explain that, while many groups tried to maintain their native languages, many gave in to social and political pressure to use only English

5. What is the best way to describe the function of the third paragraph in this excerpt? (Critical)

A) The paragraph provides its primary thesis as well an outline of the article's main points

B) The paragraph is an unnecessary and irrelevant inclusion

C) The paragraph serves to reveal the conclusions of the article before detailing the data

D) The paragraph firmly establishes the article's stance against language diversity

6. What is the best summary of why the phrase "multilingualism" is emphasized in the third paragraph?(Interpretive)

A) Language repression stems from the US's unwillingness to recognize the languages of its foreign allies

B) Because language is constantly changing and often goes through multiple phases

over time

C) The authors firmly believe that speaking more than one language gives students a substantial benefit in higher education.

D) Language policy discussions often assumes that the US has a monolinguistic history, which is untrue and poses language diversity as threatening

7. Phrases such as "prescribed panaceas" and "malady of the mind" are used in the third paragraph to (Interpretive)

A) Defend the point that the US must standardize its language education or there will be severe results

B) Point out that language is as much a physical process as an intellectual one

C) Illustrate how certain opponents of language diversity equate multilingual education with a kind of national disease

D) Demonstrate how the stress of learning multiple languages can make students ill

8. According to the fourth paragraph, all of the following are potential negatives of rapid English immersion EXCEPT(Literal)

A) It can lead to a denial of language rights for particular groups

B) Students become more familiar with conversational expressions and dialect

C) It can prevent access to certain benefits that are always available to fluent speakers

D) It can promote feelings of alienation among groups that are already in a minority status

9. The best alternate definition of "language status achievement" is (Interpretive)

A) When enough scholarly work has been produced in a language, it is officially recognized

B) Those who are in power socially and economically determine the status of a language

C) Languages fall into a hierarchy depending upon the numbers of populations that speak them

D) The position of a language in which no others may coexist with it

10. From the context of the final paragraph, what does "compulsory ignorance" mean?(Literal)

A) Populations at the time were required only to obtain a certain low level of

education

B) Slave populations were compelled to only speak in their native languages and not learn English

C) That slaves were forcibly prevented from developing their native language skills out of fear that they would gain power

D) Slave owners would not punish slaves who did not wish to learn and speak only English

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