



**UNIVERSITI PUTRA MALAYSIA**

***MEDIATING EFFECTS OF ENGLISH PROFICIENCY ON THE  
RELATIONSHIPS BETWEEN READING STRATEGIES, VOCABULARY  
SIZE AND READING COMPREHENSION AMONG SAUDI HIGH  
SCHOOL EFL LEARNERS***

**SAEED ALZHRANI**

**FBMK 2021 22**



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By

**SAEED ALZHRANI**

**Thesis Submitted to the School of Graduate Studies, Universiti Putra  
Malaysia, in Fulfilment of the Requirements for the Degree of  
Doctor of Philosophy**

**May 2021**

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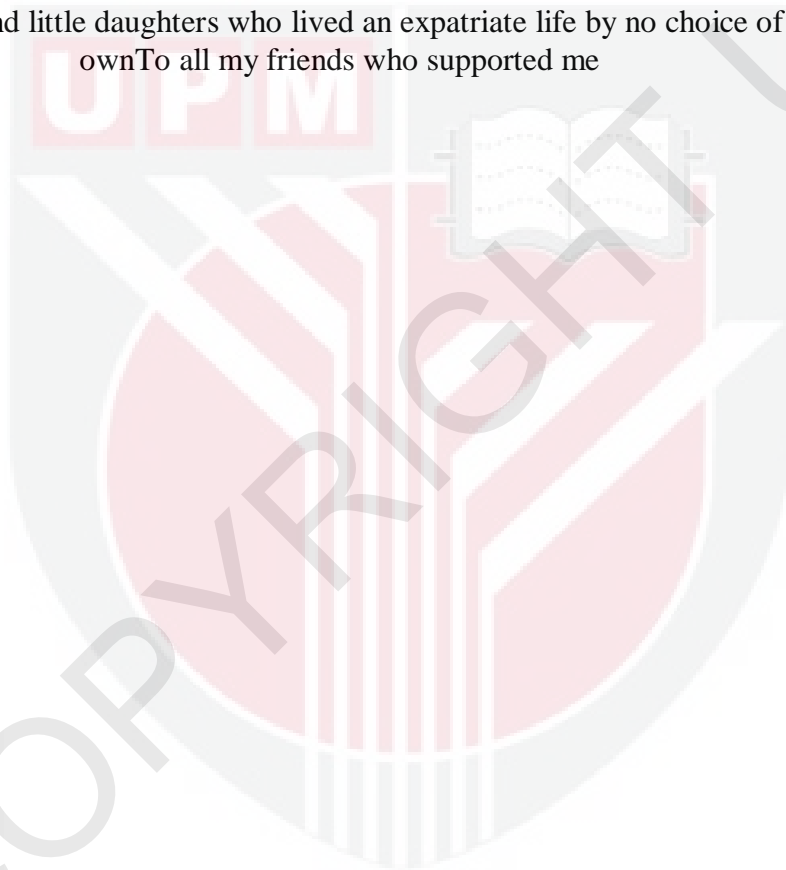
## **DEDICATION**

This thesis is dedicated to

To my late father who I lost him during my study journey, and I will miss indefinitely

To my mother who has been waiting for me to say, "I have got my degree, and I am back" To my beloved wife who assisted with undertaking all of my concerns

To my son and little daughters who lived an expatriate life by no choice of their own To all my friends who supported me



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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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**May 2021**

**Chairman : Associate Professor Sabariah binti Md Rashid, PhD**  
**Faculty : Modern Languages and Communication**

The ability to read and comprehend a text has long been considered critical for achieving success in academic studies. While a myriad of studies have investigated the components that affect learners' reading comprehension and use of reading strategies, the literature pertaining to reading comprehension among EFL Saudi adolescents is rather scarce. The scarcity of research about this populations' ability inreading comprehension, as well as the factors that may facilitate and hinder their reading comprehension makes this study particularly important. To address this gap, this study examined the mediation effects of English proficiency on the relationships between vocabulary size, reading comprehension strategies and reading comprehension achievement among Saudi high school EFL learners. The theories underpinning this study are bottom-up, top-down, and interactive models (Aebersold &Field, 1997).

This study, which employed the quantitative design, involved 200 Saudi EFL school learners. Data were gathered quantitatively and qualitatively. Specifically, two questionnaires and two tests namely, the reading strategies questionnaire (SORS), thevocabulary size test (VST), the reading comprehension test, and the proficiency test were used for the quantitative data collection. Qualitative data collection methods, namely, interviews and focus group discussion (FGD) were also used for data gathering. The quantitative data were analysed using both descriptive statistics and inferential statistics using PLS-SEM, whereas the qualitative data was analysed usingthematic analysis.

The result of the mediation effect analysis indicated that all independent variables (vocabulary size, global reading strategies, problem-solving reading strategies and support reading strategies) through English proficiency as a mediator on dependent variable (reading comprehension) were statically significant. Therefore, the result showed that English proficiency mediates the relationships between vocabulary size, global reading strategies and support reading strategies with reading comprehension. Moreover, the results of the study revealed that the problem-solving strategy was the most frequently used in reading comprehension among the Saudi EFL school learners, followed by the global reading strategies and support reading strategies. The majority of the participants also had a very low vocabulary size and proficiency level. Yet, there was a significant difference in the vocabulary size across proficiency level. The results also showed that three reading strategies had a positive and significant relationship with vocabulary size, specifically the support reading strategies, which recorded the highest correlation coefficient.

The implications of the present study provided insights about the reading comprehension challenges encountered by EFL Saudi high school learners. The study also contributed to the understanding of the factors that may facilitate and hinder reading comprehension among EFL learners. Also, the above results provide several useful insights for Saudi ESL teachers, curriculum designers, academic coordinators, and the Saudi Ministry of Education in terms of improving reading comprehension among Saudi high school EFL learners. The study presented some recommendations, the need for more research of EFL reading in Saudi Arabia and, some recommendations which related to reading materials, and reading strategy instruction.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KESAN PENGANTARAAN KECEKAPAN BAHASA INGGERIS KE ATAS  
HUBUNGAN ANTARA STRATEGI BACAAN, SAIZ KOSA KATA, DAN  
PEMAHAMAN DALAM KALANGAN PELAJAR EFL SEKOLAH TINGGI  
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Kebolehan untuk membaca dan memahami sesebuah teks telah sekian lama dianggap kritikal bagi mencapai kejayaan dalam pengajian akademik. Meskipun sekian banyak kajian telah menyelidiki komponen yang menjejaskan pemahaman bacaan dan penggunaan strategi bacaan pelajar, literatur yang bersesuaian dengan pemahaman bacaan dalam kalangan remaja Saudi EFL adalah amat kurang. Kekurangan penyelidikan mengenai kebolehan populasi dalam pemahaman bacaan, di samping faktor yang memudahkan dan yang menghambat pemahaman bacaan mereka menyebabkan kajian ini amat penting. Bagi menggarap jurang ini, kajian ini menelitikesan pengantaraan kecekapan bahasa Inggeris ke atas hubungan saiz kosa kata, strategi pemahaman bacaan dan pencapaian pemahaman bacaan dalam kalangan pelajar EFL sekolah tinggi Saudi. Teori yang menunjangi kajian ini ialah model bawah ke atas, atas ke bawah, dan model interaktif (Aebersold & Field, 1997).

Kajian ini, yang menggunakan reka bentuk kuantitatif, melibatkan 200 pelajar EFL sekolah tinggi Saudi. Data telah dikumpul secara kuantitatif dan kualitatif. Khususnya, dua soal selidik dan dua ujian iaitu, soal selidik strategi bacaan (SORS), ujian saiz kosa kata (VST), ujian pemahaman bacaan, dan ujian kecekapan telah digunakan untuk pengumpulan data kuantitatif. Kaedah pengumpulan data kualitatif, iaitu, temubual dan perbincangan kumpulan berfokus (FGD) juga telah digunakan untuk pengumpulan data. Data kuantitatif telah dianalisis menggunakan kedua-dua statistik deskriptif dan statistik inferensi menggunakan PLS-SEM, manakala data kualitatif telah diinterpretasi dan dibincang dalam lingkungan objektif kajian bagi memberikan penangapan selanjutnya terhadap fenomena yang sedang dikaji.

Dapatan analisis kesan pengantaraan memperlihatkan bahawa semua pemboleh ubah tak bersandar (saiz kosa kata, strategi bacaan global, strategi bacaan penyelesaian masalah dan strategi bacaan sokongan) melalui kecekapan bahasa Inggeris sebagai mediator ke atas pemboleh ubah bersandar (pemahaman bacaan) secara statistik adalah signifikan. Oleh sebab itu, dapatan menunjukkan bahawa kecekapan bahasa Inggeris menjadi pengantara antara saiz kosa kata, strategi bacaan global dan strategibacaan sokongan dengan pemahaman bacaan.

Dapatan juga memperlihatkan bahawa strategi penyelesaian masalah merupakan strategi yang paling kerap digunakan dalam pemahaman bacaan dalam kalangan pelajar EFL sekolah tinggi Saudi, diikuti oleh strategi bacaan global dan strategi bacaan sokongan. Majoriti responden juga mempunyai saiz kosa kata dan tahap kecekapan yang amat rendah. Namun, terdapat perbezaan yang signifikan dalam saiz kosa kata merentas tahap kecekapan. Dapatan juga menunjukkan bahawa tiga strategi bacaan mempunyai hubungan yang positif dan signifikan dengan saiz kosa kata, khususnya strategi bacaan sokongan, yang merekodkan pekali korelasi tertinggi. Dapatan juga menunjukkan beberapa cabaran pemahaman bacaan yang dihadapi oleh pelajar EFL sekolah tinggi Saudi.

Kajian ini menyumbang kepada kefahaman mengenai faktor yang memudahkan dan yang menghambat pemahaman bacaan dalam kalangan pelajar EFL sekolah tinggi, terutama dalam konteks Saudi. Kajian ini juga adalah relevan kepada guru EFL Saudi dan pereka bentuk kurikulum Bahasa Inggeris dari segi keperluan untuk meningkatkan pemahaman bacaan pelajar Saudi bagi membangunkan bahan bacaan yang sesuai di samping bagi mendedahkan pelajar kepada strategi bacaan yang sesuai dalam pengajaran dan pembelajaran EFL



## ACKNOWLEDGEMENTS

**With the name of Allah, the most Compassionate and Most Merciful**

All praise and thanks to Almighty Allah, with His blessing giving me the strength and passion, I could manage to finish the research until this manuscript completed be compiled.

I thank Allah, the All Mighty, for His help and assistance that made my journey through the graduate program quick and easy. I would like also to express my most sincere appreciation to the many people who contributed to the completion of this dissertation. This accomplishment involves the encouragement, guidance, and support of my committee members, family, colleagues, and friends. I am filled with profound gratitude to my chair supervisor Prof. Sabariah Md Rashid, and to my co-supervisors Dr. Yong Mei Fung and Dr. Ilyana Jalaluddin. Their guidance and encouragement were a major determinant in the completion of this work.

I gratefully acknowledge the support of my Sponsorship ( Albah University ) for granting me full paid study leave. My appreciation to dean and all lecturers in the Department of English Language in the faculty of Arts and Sciences at (Almandaq) for giving me sound advice and moral support from time to time.

I would like also to express my cordial thanks and gratitude to my beloved mother and wife for their prayers and support. I sincerely ask Allah, the All Mighty, to reward you the best for what you did and continue to do for me. My deepest thanks also go to my beloved son and daughters, Battal, Sila, and Tala for their love and patient. Although the completion of my graduate studies deprived them from their father during critical times of their lives, they were always supportive and cheering.

I would like also to express my appreciation to the many people who helped in collecting the data of the current investigation. Several colleagues were of great help and support in collecting data from males' secondary schools.

Finally, to all those brothers and sisters who helped in bringing this effort to completion, I would like to say, "May Allah reward you abundantly".

This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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## LIST OF ABBREVIATIONS

ESL	English as a Second Language
EFL	English as a Foreign Language
L2	Second Language
FVR	Free Voluntary Reading
ER	Extensive Reading
GS	Global Reading Strategies
SS	Support Reading Strategies
PSS	Problem- Solving Reading Strategies
IV	Independent Variable
DV	Dependent Variable
RS	Reading Strategies
VS	Vocabulary Size
RC	Reading Comprehension
RCT	Reading Comprehension Test
SORS	Reading Strategies Survey
VST	Vocabulary Size Test
OQPT	Oxford Quick Placement Test
FGD	Focus Group Discussion
MOE	Ministry of Education
M	Mean
SD	Standard Deviation
ESM	Structural Equation Modeling

# CHAPTER 1

## INTRODUCTION

### 1.1 Introduction

The ability to read and comprehend a written text is an essential component of literacy and academic success. While it is well recognized that reading skill is crucial to language learning, there are several factors that are inherent in the reading comprehension process which may present challenges to some readers in acquiring the skill. According to Scanlon, Anderson and Sweeney (2016), reading is an interactive process that combines reader variables, such as the purpose of reading, background knowledge, interest in the topic and text variables, such as the text structure and vocabulary, which interact among each other to create specific meanings from the text.

Language learners, teachers, and researchers seem to invariably appreciate the important role of reading in language learning and literacy. They substantially regard reading as responsible for the development of academic skills (Anderson, 1999). For example, students sometimes need to expand their knowledge of a certain topic independently of their teachers. Similar to one's ability to read efficiently in their L1, the ability to read in L2 is necessary for developing quick and efficient language and academic skills. The ability to read in English is also considered a particular importance because of the fact that much of the academic and professional material is available in English (Alderson, 1984; Opoku-Amankwa & Brew-Hammond, 2011).

Many second language learners report that they are unable to efficiently comprehend what they read (Matsuoka & Hirsh, 2010). Research on reading comprehension has relentlessly attempted to account for this phenomenon; however, the general pattern of results suggests that reading comprehension is influenced by numerous factors, irrespective of the fact that some factors are more influential than others. For example, one line of research attributes comprehension failure to students' inability to use effective reading strategies (Cid, 2009; Cullinan & Bagert, 1996; Egan, 2014; Kung, 2012; Leckie, 2013), whereas others associate students' inability to use effective reading strategies with the lack of enough prior knowledge (Kintsch, 1994, 2004). Research also suggests the ability to read and comprehend is an innate skill while others argue it is acquired during schooling (Bell, 2012; Ellett, 2014; Tong, 2015).

The literature about reading comprehension and the aspects that contribute to language reading comprehension among ESL/EFL learners has been growing over the last five decades, particularly studies with university-level students, but the availability of evidence about EFL secondary school students' reading comprehension is still relatively scarce, especially among Saudi EFL learners. Nezami (2012) conducted research on university-level EFL Saudi learners and reported that Saudi EFL learners have difficulty in understanding the meaning of the reading material. Nezami

attributed their poor reading comprehension to a wide range of factors which include inefficient teaching instruction, inappropriate teaching material, lack of practice in class, limited vocabulary and lack of motivation.

Similar reading problems in the secondary school context have also been demonstrated by other studies (Al Nooh & Mosson-McPherson, 2013; Dean, 2013; Denton & Vaughn, 2010 Pyle & Vaughn, 2012). They found that students' overall comprehension, reading fluency, motivation and retention were among the most problematic variables that influence their reading achievement. However, there is no conclusive research that can reliably indicate which strategy or specific method is more effective in improving reading comprehension among Saudi students.

Based on these explanations presented above, it might be reasonable to argue that understanding the factors that influence/determine students' reading comprehension play a central role in effective strategies to assist students in improving their reading comprehension. As a result, this study focuses on reading comprehension among EFL learners in Saudi secondary schools with particular emphasis on the relationships between vocabulary size, reading strategies, and reading comprehension achievement while controlling for students' language proficiency as a mediating variable. Further elaboration about the topic of the study is presented in the subsequent sections.

## **1.2 Education and English Language Instruction in Saudi Arabia**

In Saudi Arabia, students only begin English-language instruction in public schools in the fourth grade although private language schools offer English classes for children of primary age upwards. However, in 2014, the Saudi government introduced a comprehensive English language curriculum for primary, intermediate and secondary schools (from grades 4-12) known as the English Language Curriculum for Elementary, Intermediate and Secondary Schools in the Kingdom of Saudi Arabia Grades 4 – 12, 2014 – 2020 (Brendan, 2017). This initiative involved a partnership between the “Ministry of Education (English language) curriculum division and Tatweer Company. The Tatweer Company for Educational Services organizes various professional development opportunities for English teachers together with the Ministry of Education. These training initiatives have included areas such as English language proficiency training, English language proficiency testing, effective use of textbooks, and developing teachers' pedagogical skills.

Despite the improvements to teaching standards heralded by the English Language Curriculum for Elementary, Intermediate and Secondary Schools in the Kingdom of Saudi Arabia, Al-Seghayer (2014) has highlighted that a significant number of Saudi EFL teachers are not yet fully able to provide an adequate standard of English language instruction due to their limited professional and linguistic abilities. Al-Seghayer states that Saudi EFL teachers “do not have a firm grasp of methods of teaching language elements” (p. 146) in terms of having an adequate theoretical knowledge of how student's attitude, age, aptitude, and motivation affect their ability to learn English as an L2. In addition, the Saudi EFL teachers do not have an adequate

knowledge about the strategies needed for teaching the four language skills in addition to vocabulary.

Many factors shape the nature of EFL learners and learning in Saudi Arabia; the community, culture, religion, learning practices, and the learners' Arabic mother language. In Saudi Arabia, while attempts to incorporate EFL into the education system began in the 1930s, these efforts have dramatically increased over the last three decades. English is now considered the second most-used language for communication after Arabic. It is also the only foreign language taught within the formal education system and is extensively used by international institutions, industry, and international companies.

In the Saudi EFL context, several researchers have identified numerous further challenges and difficulties related to reading and reading comprehension in English. These include factors relating to learning practices and the lack of training available for improving Saudi EFL learners' reading comprehension skills. Others relate these reading difficulties to the characteristics of Saudi students themselves, such as their lack of knowledge of reading strategies, poor vocabulary knowledge, insufficient time allocated to the task, and the level of attentiveness to EFL material. Students may also fail to appreciate the purpose of reading and be poorly-motivated learners (Al-Sulaimani, 1990; Kondarge, 1991; Al-Ebsi, 1997; Alebsi, 2002; Awad, 2002; Alsamadani, 2009).

While Arabic is the official language of Saudi Arabia, English is gradually being the lingua franca among the Saudis and most of foreign workers the private sector. The Saudi government has reflected on the fundamental role that English plays worldwide in public policy statements, and thus is aware that English has become the language of science and technology and is a key factor in modernization (Al-Asmari & Khan, 2014; Alrashidi & Phan, 2015; Al-Seghayer, 2005; Elyas & Picard, 2010). However, according to research on Saudi EFL learners, there are various challenges that encounter their language development and hence the Saudi 2030 Vision. For instance, the Saudi test takers have always scored low in their English proficiency tests, specifically in their reading comprehension test (IELTS, 2012).

Research in applied linguistics and specifically in language reading and comprehension suggest that improving EFL learners' vocabulary knowledge and their ability to use reading strategies effectively may play an important role in language achievement (Al-mekhlafi, 2018; Altalhab, 2019; Kazi et al., 2020). In line with this claim and the studies on the role of vocabulary size and reading strategies in reading comprehension, the present study aims to investigate these factors that impede and facilitate English reading comprehension among Saudi school EFL learners. This may provide insights into the problems encountered by school students in Saudi Arabia and thus considerations for English teachers to make the necessary pedagogical approaches to assist the students overcome these language challenges.

### 1.3 Statement of the Problem

It is a common understanding that success in reading comprehension is not measured by the number of words that one can understand, but rather by the extent to which one can gain an understanding of the overall text. Specifically, this understanding is supported by readers' use of linguistic and metalinguistic factors that cooperate for comprehending the target reading material (Marloes et al., 2017). The literature maintains that EFL learners routinely face a wide range of challenges in reading comprehension (Al-Jarrah & Ismail, 2018; Amini et al., 2020; Ganie et al., 2019; Qrquez & Rashid, 2017). Early research has largely debated on whether student's inefficiencies in reading ability are due to language problems or reading problems (Melby-Lervåg & Lervåg, 2014; Spiro et al., 2017). In simpler terms, the language problems are concerned with one's L2 linguistic proficiency and knowledge, whereas the reading problems are related to one's L1 reading ability and use of reading strategies (Al-Nujaidi, 2003). However, Alderson (1984) suggests that the answer tends to be both a language problem and a reading problem albeit it is more of a language problem for low levels of foreign language competence than a reading problem.

In considering reading as a language problem, research on second and foreign language reading has placed emphasis on the relative role of vocabulary knowledge as a determining factor in reading comprehension (Al-khasawneh, 2019; Altalhab, 2019; Ocampo & McNeill, 2019; Zhang & Zhang, 2020). For example, Altalhab (2019) conducted a study on Saudi university students to investigate the extent to which vocabulary size would contribute to reading comprehension. Altalhab found a positive association between students' vocabulary size and reading comprehension. Saudi students also had a major problem with their vocabulary size and therefore one possible explanation for their impoverished reading ability. However, despite the presence of an association between vocabulary size and reading ability, the evidence on the role of vocabulary size among secondary school EFL learner's reading comprehension is relatively scarce in the Saudi context (Al-Qahtani, 2016; Alsubaie, 2014; Roomy & Alhawsawi, 2019a); and therefore, there is a lack of reports that inform the Saudi school educators about the problems associated with their students' reading comprehension and vocabulary knowledge.

The inefficiency in reading comprehension among EFL learners is also thought to be correlated with low levels of language proficiency (Nyarko et al., 2018). There is a number of empirical studies which suggest that learners at different proficiency levels may exhibit different levels of comprehension and different reading strategies (Janebi et al., 2020). For instance, Nordin, Rashid, Zubir, and Sadjirin (2013) found that better reader comprehension was observed among students with proficiency advantage than those with weaker proficiency. Furthermore, the higher-proficiency students used post-reading strategies and guesses to understand what they had read, including scanning headings and titles to boost their reading comprehension skills further, whereas the lower-proficiency students tended to rely on while-reading strategies and generally did not use strategies akin to those used by higher-level students.

While it appears that the link between ESL students' proficiency level and reading comprehension skills is well established, a more nuanced view of the literature suggests that the type of reading strategies that higher-level readers apply to reading texts predicts their success in reading (Al-mekhlafi, 2018; Al-Nujaidi, 2003; Kazi et al., 2020). In this respect, it remains indecisive whether the students' level of language proficiency or reading strategies is the factor that best predicts reading comprehension, and how these students with different levels of proficiency are likely to rely on different reading comprehension strategies. Therefore, an investigation is needed to determine how school students at varying proficiency levels would benefit from reading strategies to enhance their reading comprehension.

It is also worth noting that despite the critical role played by metalinguistic factors in second or foreign language (L2) reading, the literature has focused almost exclusively on university students and little attention has been paid to the role of reading strategies in reading comprehension among Saudi school students (Al-Nujaidi, 2003; Altalhab, 2019; Keezhatta & Omar, 2019; Roomy & Alhawsawi, 2019b). In previous seminal work, Al-Nujaidi (2003) investigated the relationship between reading strategies and reading comprehension of EFL Saudi university learners. Al-Nujaidi found that reading strategies substantially impact Saudi EFL reading comprehension. Students' lack of knowledge of reading strategies, lack of prior knowledge, lack of enthusiasm and of attention were also considered the bottleneck of their poor reading comprehension (Al-Sulaimani, 1990; Kondarge, 1991; Al-Ebsi, 1997; Alebsi, 2002; Awad, 2002; Alsamadani, 2009). Yet, the literature on the Saudi context appears to be less attentive to the role of reading strategies in reading comprehension among Saudi secondary school students. It might be tempting to school educators and researchers in the field to have an informed account about the type of reading strategies employed by secondary school students in Saudi Arabia, and therefore to enable them to make an informed decision onto how to assist them overcome their reading comprehension difficulties in earlier stages before their higher education.

There is recent evidence in the literature which demonstrates that English proficiency is a strong predictor of reading comprehension and vocabulary size, and it has a significant impact on the use of reading strategies in reading comprehension (Al-mekhlafi, 2018; Al-khasawneh, 2019). For instance, in their study on the relationship between vocabulary size and EFL language skills, Miralpeix and Muñoz's (2018) found a positive and significant relationship between vocabulary size and English proficiency—those with higher English proficiency had stronger vocabulary resources. In addition, those who have superior language proficiency tended to have their vocabulary knowledge moderate their reading comprehension achievement.

Whilst many studies have examined the effect of English proficiency on some related language performance, there is a limited number of studies which has considered English proficiency as a mediating variable in a causal-effect study on some language performance. For instance, a review of the published related literature revealed that there is only one study which has considered English proficiency as a mediator of intelligibility for different varieties of accents (Kang, Moran, Ahn & Park, 2020). This study examined whether English proficiency has a significant effect on non-native



speakers' (with different language backgrounds) comprehension ratings and ability to transcribe different World Englishers accents correctly. The results indicated that the proficiency level of the listener played a significant mediating role in affecting their intelligibility for the different varieties of accents.

The aforementioned evidence in the reviewed literature suggests that English proficiency among EFL learners is a significant learner variable which warrants further investigation. In this study, therefore, the main focus is on the role of English proficiency as a mediator in the relationships between the three types of reading strategies, vocabulary size and reading comprehension among Saudi secondary school EFL learners. To date, as far as the researcher is concerned, there has been no published studies which examined English proficiency as a mediator in the relationships between reading strategies, vocabulary size and reading comprehension, and evaluating this causal-effect model using the Structural Equation Modelling (SEM-Smart-PLS).

In summary, given the perceived interdependence of vocabulary size and reading strategies and the role of language proficiency in predicting reading comprehension achievement in the literature, the present study aims to investigate the role of these variables in reading comprehension among Saudi secondary school EFL learners. By using a Structural Equation Modeling (SEM), as a strong measure for evaluating the variables best predicts reading comprehension, the present study aims to identify the factors that could predict school students' reading comprehension achievement. The results are hoped to provide insights for the Saudi Ministry of Education and Saudi-based English teachers to make changes to their pedagogical approaches to improve teaching and learning the reading comprehension skills.

#### **1.4 Objectives of the Study**

This study addressed the following objectives:

1. To identify the types of reading strategies used in reading comprehension by the Saudi high school EFL learners.
2. To determine the vocabulary size for the Saudi high school EFL learners.
3. To examine the relationships between reading strategies, vocabulary size, and reading comprehension for the Saudi high school EFL learners.
4. To determine the role of proficiency level as a mediator in the relationships between reading strategies, vocabulary size, and reading comprehension.
5. To identify the difficulties that Saudi high school EFL learners face in reading comprehension.

## 1.5 Research Questions and Hypotheses

In the light of the research objectives stated above, the research questions and hypotheses of the study are given as following:

1. What are the types of reading strategies that are most and least frequently used by the Saudi high school EFL learners?
2. What is the vocabulary size of the Saudi high school EFL learners?
3. Are there any significant relationships between reading strategies, vocabulary size, and reading comprehension as measured by the following hypotheses:

**H1:** There is no significant relationship between reading strategies, vocabulary size, and reading comprehension.

H1-1: There is no significant relationship between the global reading strategies and reading comprehension.

H1-2: There is no significant relationship between the problem-solving reading strategies and reading comprehension.

H1.3: There is no significant relationship between the support reading strategies and reading comprehension.

H1-4: There is no significant relationship between vocabulary size and reading comprehension.

4. To what extent does English proficiency mediate the relationship between vocabulary size, and reading comprehension as measured by the following hypotheses:

**H2:** English proficiency significantly mediates the relationship between the reading strategies, vocabulary size and reading comprehension

H2-1: English proficiency significantly mediates the relationship between the global reading strategies and reading comprehension

H2-2: English proficiency significantly mediates the relationship between the problem-solving reading strategies and reading comprehension

H2-3: English proficiency significantly mediates the relationship between the support reading strategies and reading comprehension.

H2-4: English proficiency significantly mediates the relationship between vocabulary size and reading comprehension.

5. What are the difficulties that Saudi high school EFL learners face in reading comprehension?

## **1.6 Theoretical Framework**

During the past six decades, several differing views about the nature of the reading process have resulted in the emergence of a number of theories to explain how reading comprehension occurs. The bottom-up model (Gough, 1972), the top-down model (Goodman, 1967; Smith, 1971), and the interactive model (Rumelhart, 1977, 1980; Stanovich, 1980) seem to have always been the most prominent models in reading comprehension research. It is almost every single reading strategy and skill was accounted for on the theoretical assumptions of these models.

The present study will be guided by the interactive reading model. The interactive model thus far appears to be the most promising model in the literature which can explain how reading comprehension takes place among ESL and EFL learners. This model is known to encompass both the bottom-up and top-down processes and incorporates the interaction between both the text factors and reader factors, like background knowledge, reading strategies, language proficiency, and beliefs into the reading process (Aebersold & Field, 1997).

### **1.6.1 Bottom-Up Model**

This model was established in the 1960s, and it views reading as a linear process by which readers start with letters, then proceed to the word level, and then finally understand meaning at the sentence and textual levels. This model is also known as the hierarchical model, which means that one needs to know not only the letters to access the meanings of the words, but one must also understand all the words in a sentence or clause to understand its full meaning (Paron, 1997). Therefore, the bottom-up model places a strong emphasis on one's skills in word decoding and letter recognition, which represent the basic units of meaning, besides one's vocabulary knowledge for comprehending meaning at the textual level. This model emphasizes on texts that are written or printed and claims that meaning is the result of a process in which reading proceeds from part to whole (Liu, 2010).

### **1.6.2 Top-Down Model**

This model, introduced by Goodman (1967), views reading as a psycholinguistic guessing game, where readers' background knowledge and expectations provide an important guide in constructing the meaning of a text. Readers start reading the text with certain expectations (based on their background knowledge), and use their vocabulary knowledge to confirm, disconfirm, or modify previous expectations (Aebersold & Field, 1997). The top-down model also depends on specific reading skills, such as prediction, inference making, and content guessing. Therefore, this model is different from the bottom-up model in that texts have no stand-alone meaning, but rather, the reader reconstructs the meaning of the text by applying their prior knowledge. This process is referred to as concept-driven model (Liu, 2010) where knowledge of a higher level which affects processing at a lower one is involved.

### 1.6.3 The Interactive Model

This model views reading as a process in which both the bottom-up and top-down processes interact before the construction of the meaning occurs in the reader (Rumelhart, 1977; Stanovich, 1980). The proponents of this model assert that neither the bottom-up processes nor top-down processes can, by themselves, describe the reading process, but rather it is through their compensation for each other that reader's construct the meaning of a text (Eskey & Grabe, 1988).

The interactive model also depends on considerable evidence demonstrated by studies employing the schema theory. According to Anderson and Pearson (1984), schema is the prior knowledge readers' exploit during reading for better comprehension. Carrell (1983) also suggests the text itself usually functions as a guide to the particular kind of background information that should be activated for comprehension. In this respect, research assumes that poor readers tend to resort to top-down processes more often than skilled or fluent readers in order to compensate for their lack of recognition skills or their use of bottom-up processes.

Bilokuoglu (2012) suggests that in interactive model, "readers are expected to go through both bottom-up and top-down processing before eventually settling upon an interpretation of a text topic" (p.16). Neither neglecting the textual information nor the prior knowledge of a reader, the interactive model stresses on what has already printed or written and what the reader may bring to it by using both the bottom-up and top-down reading processes.

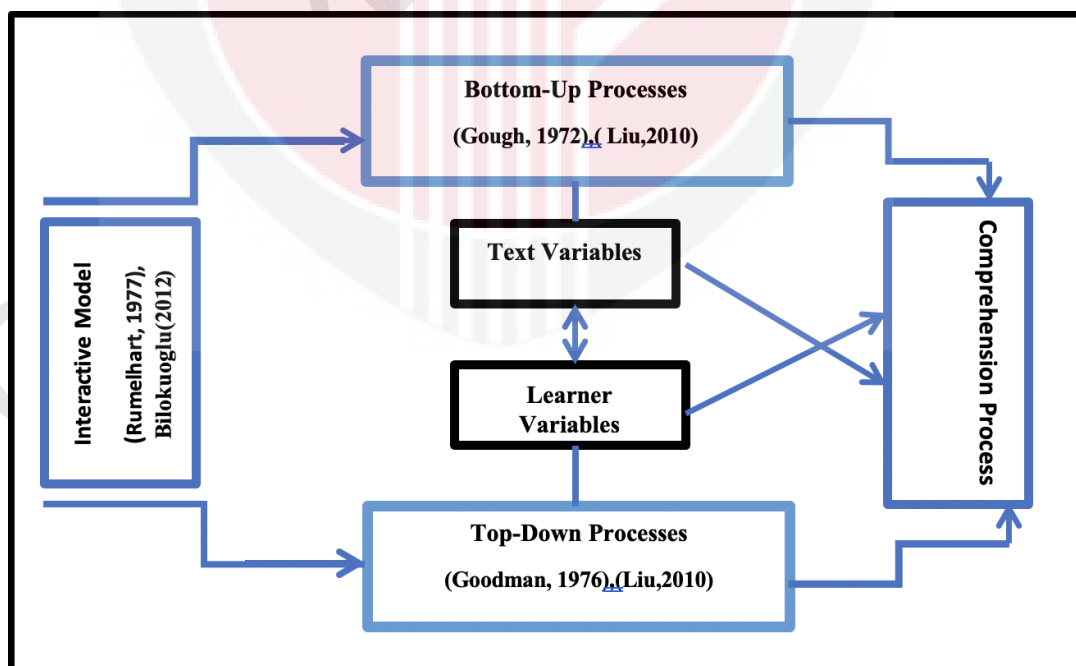


Figure 1.1 : Theoretical Framework

In Figure 1.1, the interactive model suggests that the bottom-up and top-down processes compensate for each other in providing the necessary information required for comprehension. The bottom-up model emphasises that texts are constructed from the smallest to largest units of letters, word, phrases, clauses, sentences, text which is undertaken in collaboration with grammatical knowledge. On the other hand, the top-down model argues contrary to the bottom-up approach emphasizing that what a reader has already known with regards to a topic of the text and may bring to it as processes preceding from whole to part.

However, if a reader lacks the necessary bottom-up skills, then they will resort to top-down processes through which they will exploit prior knowledge to enable better comprehension. As a result, the interactive model is considered a combination of both top-down and bottom-up processing and seeks to suggest a mechanism in which the processes of both data-driven sensory information and non-sensory information occur simultaneously. This implies that prior to making an interpretation of a text, a reader should go through the top-down process and bottom-up process for their reading comprehension. While the present study focuses on the interactive model only, it is acknowledged that other studies in the field of reading comprehension studies had adopted the metacognitive theory (e.g. Mokhtari and Reichard, 2002) and schema theory (e.g. Piaget, 1962; An, 2013).

## 1.7 Conceptual Framework

Previous research has shown that reading is a complicated process that incorporates various variables. One of the main objectives of the present study was to find out the factors that impact reading comprehension among Saudi EFL learners. As given in the conceptual framework of the study, there are various independent variables under investigation, namely, learners' reading strategies and vocabulary size which may correlate with reading comprehension achievement.

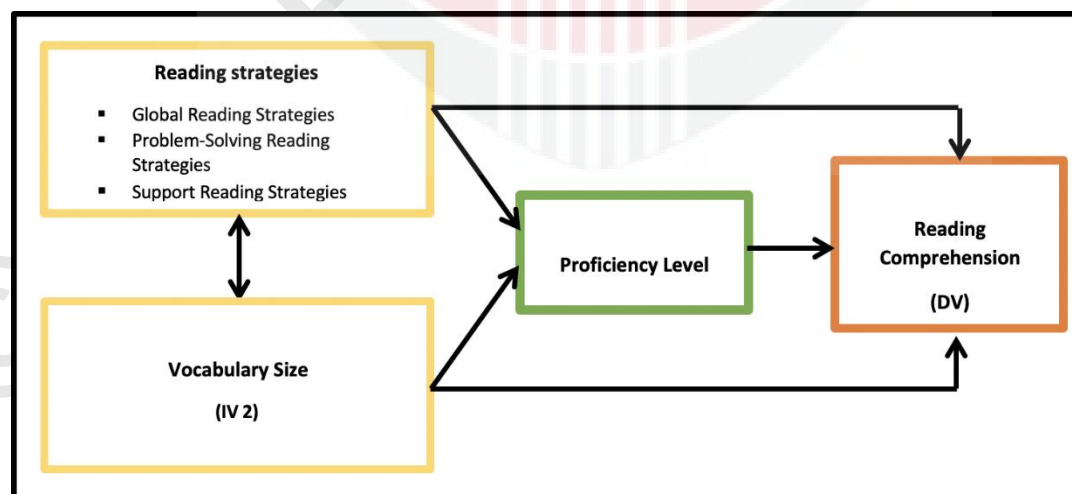


Figure 1.2 : The Conceptual Framework

Finally, the study aimed to include semi-structured interviews with students as qualitative variables and focus group discussion that serve to provide insights about reading comprehension. The conceptual model of this study will analyse based on Hair et al (2017) by using SEM analysis which comprises the measurement model assessment and the structural model assessment. The measurement model assessment will be used to ensure the reliability and validity of the construct measures, while the structural model assessment tests the proposed model which examines the relationships among the constructs and the mediation effects on the relationships of the constructs.

### **1.8 Scope of the Study**

This study was limited to the investigation of the factors that influence reading comprehension achievement among Saudi EFL learners, particularly secondary-school students. The study focused on the variables that contribute to reading comprehension among students, and therefore, it did not include any instructional or class-based issues.

The participants were exclusively Saudi EFL high school students recruited from local schools in Saudi Arabia. They share some common characteristics in that they are all L1 Arabic speakers and share a common ethnic background. Additionally, due to difficulties of access to female students in Saudi Arabia, the study was confined only to male subjects, as participants in this research.

### **1.9 Significance of the Study**

On a theoretical level, the findings of the present study provided insights into the reading comprehension challenges encountered by EFL secondary-school students in general, and Saudi students in particular. The study may also contribute to our understanding of the factors that facilitate and hinder reading comprehension among EFL learners. It also informed the theories of teaching and learning about how high-school EFL learners read and comprehend English texts, particularly in the Arab EFL context.

On a pedagogical level, this study served as a reference point for language teaching and learning practices in Arab EFL contexts. Specifically, it provides a special contribution to educational policy and curriculum development in Saudi Arabia. Curriculum planners can develop more effective approaches to teaching and learning reading comprehension, and thus improve the overall reading comprehension threshold among Saudi students. This improvement may lessen the gap between high-school learners' low-level of proficiency and the high-level of proficiency at universities. Many students face difficulties comprehending English material in universities, which resulted in a high dropout rate. Their inability to read L2 material efficiently can hinder their future academic and professional development, particularly for those whose professions rely on L2 English language texts.

From a research perspective, there is scarce research about the problems encountered by Saudi secondary-school EFL learners. The majority of research have focused on students at university level, thus placing a significant emphasis on providing measures of the factors that affect and facilitate reading comprehension among secondary-school students. The provision of evidence about these students' reading abilities and vocabulary knowledge, as well as the factors that help them become better readers at an earlier age before their admission at university, may lessen the gap and reduce the challenges between school and university learning environments. Thus, the current study hoped to illuminate the inefficiencies in the teaching and learning approaches employed in the Saudi educational system to enhance learners' reading comprehension.

### 1.10 Definition of Key Terms

This section provides the definitions and operational definitions of the key terms used in the present study.

**English as a Foreign Language (EFL)** refers to “The role of English in countries where it is taught as a subject in schools but not used as a medium of instruction in education nor as a language of communication (e.g., government, business, industry) within the country.” (Richards et al., 1992; pp.123-124). In this study, EFL learners refer to Saudi high school EFL learners.

**Reading Strategies:** methods or patterns that reveal readers' resources for understanding (Langer, 1982). This study identified three broad categories of reading strategies: namely, global reading strategies, problem-solving strategies, and support strategies. In this study, the researcher defines reading strategies according to three types: global reading strategies, problem-solving reading strategies, and support reading strategies.

- i. *Global reading strategies:* This strategy is thought of as a universal technique that readers use when they first encounter a text and it involves a reflection on why they are reading the text (Mokhtari & Sheorey, 2002).
- ii. *Problem-solving reading strategies:* These are localized, focused techniques that readers use when they encounter problems related to understanding a text (Mokhtari & Sheorey, 2002).
- iii. *Support reading strategies:* These strategies aid readers to enhance their comprehension and retention (Mokhtari & Sheorey, 2002).

**Reading Comprehension Achievement:** The amount of understanding attained after reading a text. Reading comprehension achievement is measured by the score students attain in a reading comprehension test. In this study, the two reading passages were adopted from the National Centre of Assessment in Saudi Arabia, the maximum achievement score was 12 and the minimum was zero.

**Reading Strategies Questionnaire (RSQ):** A questionnaire that measures the extent to which an EFL reader uses a particular reading strategy. RSQ includes terms that indicate three types of reading strategies: global reading strategies, problem-solving reading strategies, and support reading strategies.

**Vocabulary Size:** The capacity of readers to acquire new lexis. This ability represents a highly significant predictor of reading ability and a reader's ability to glean new information from written texts (i.e., Nation, 2001; Qian, 2002). Vocabulary size in this study refers to the ability of EFL learners to identify new vocabulary in a text and use them frequently. In this study the vocabulary size for Saudi high school EFL learners is measured by a score students obtain in the vocabulary size test. In this study the maximum score is 40 and the minimum is zero.

**English Proficiency Level:** The ability to speak or express the language with sufficient structural accuracy and vocabulary to participate smoothly and effectively in most formal and informal conversations on practical, social, and professional topics. (Cambridge English, 2006). This achievement is measured by a score students obtain in an English proficiency test. In this study, Oxford Quick Placement Test (Oxford University Press & Cambridge Local Examinations Syndicate, 2004) was used to measure the participants' level of proficiency. The maximum achievement score is 40 and the minimum is zero.

**Mediator** is a third variable which explains a relationship between two correlated variables in that it accounts for how or why a relationship between two variables exists (Hair et al., 2017). In this study, English proficiency is examined as a mediator variable in the relationships between reading strategies, vocabulary size and reading comprehension achievement.



## **1.11 Summary**

This chapter provided a general background on the topic of the study and illustrated that EFL learners always face problems associated with reading comprehension. The statement of the problem explained how various factors intricately contributed to language comprehension and how the current study in the Saudi EFL context filled this gap in research.

The chapter also critically discussed the theories that should explain the data of the present study. Finally, this chapter pointed out the significance of this research and defined the scope and provided definitions of the key terms used throughout.

## **1.12 Structure of the Thesis**

This thesis is organized into five chapters. Chapter One sheds light on the background of the study, problem statement, objectives, research question, hypotheses and significance of the study. Besides, scope of the study, theoretical and conceptual of the study and operational definitions of terms are also presented in chapter one. Chapter Two provides a detailed theoretical discussion, an overview of the main variables of the study and the review of previous research which are related to reading, reading strategies, vocabulary size, English proficiency and reading comprehension achievement. Chapter Three outlines the research methodology which provides an explanation on the research approach and design. In this chapter, the focus is on the primary research instruments and procedures used in the collection and analysis of data as well as the pilot study. The findings of the study are discussed in Chapter Four. Finally, Chapter Five presents the main findings, implications, significant contributions and limitations of the study and offers some recommendations for further research.

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