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**THE ROLES OF SELF-EFFICACY AND METACOGNITION IN
READING COMPREHENSION AMONG SAUDI EFL LEARNERS**



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UUM
Universiti Utara Malaysia

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2019**



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Abstrak

Aspek pemahaman bacaan pelajar Saudi secara umumnya tidak memuaskan apabila mereka mendaftar di universiti. Namun demikian, penyelidikan tentang hubungan antara sumber keberkesanan diri dengan pemahaman bacaan adalah terhad dalam konteks EFL. Selain itu, kajian juga terhad tentang hubungan antara strategi membaca metakognitif dengan pemahaman bacaan dengan menggunakan keberkesanan diri sebagai mediator. Kajian ini bertujuan mengenal pasti urutan hierarki sumber keberkesanan diri dan strategi membaca metakognitif. Selain itu, kajian juga bertujuan menentukan tahap bacaan keberkesanan diri dan pemahaman bacaan. Kajian juga mencadangkan bahawa kepercayaan keberkesanan diri dalam bacaan mungkin bertindak sebagai pengantara hubungan sumber keberkesanan diri, strategi membaca metakognitif, dengan pemahaman bacaan. Penyelidikan ini menggunakan reka bentuk penyelidikan korelasi dengan kaedah campuran. Data kuantitatif dikumpul melalui soal selidik yang menggunakan persampelan rawak berstrata berkadar daripada 383 orang pelajar EFL Saudi. Di samping itu, data kualitatif dikumpul menerusi temu bual separa berstruktur dengan enam orang pelajar EFL Saudi melalui persampelan bertujuan homogen. Dapatan menunjukkan bahawa 'pengalaman penguasaan' merupakan sumber keberkesanan diri yang paling kerap dilaporkan, sedangkan 'keadaan fisiologi' kurang dilaporkan. Tambahan pula, 'strategi global' merupakan strategi membaca metakognitif yang paling kerap dilaporkan, manakala 'strategi sokongan' paling kurang dilaporkan. Majoriti pelajar juga mempunyai tahap pembacaan diri yang lebih tinggi. Berhubung tahap pemahaman bacaan, kebanyakan pelajar merupakan pembaca 'melebihi purata'. Kepercayaan keberkesanan diri dalam bacaan bertindak sebagai pengantara hubungan sumber keberkesanan diri dengan pemahaman bacaan kecuali 'keadaan fisiologi'. Selain itu, kepercayaan keberkesanan diri dalam bacaan bertindak sebagai pengantara hubungan strategi membaca metakognitif dengan pemahaman bacaan. Dapatan kualitatif mendedahkan beberapa faktor yang mempengaruhi sumber keberkesanan diri/strategi membaca metakognitif dalam pemahaman bacaan seperti peranan guru, persekitaran yang kompetitif, keyakinan, masa yang terhad, imbasan, visualisasi, dan pengambilan nota. Dapatan ini memberikan beberapa implikasi kepada guru EFL dan pembuat dasar yang bermanfaat kepada pelajar EFL dari segi peningkatan keberkesanan diri mereka dan peningkatan strategi metakognitif mereka dalam pemahaman bacaan.

Kata kunci: Sumber keberkesanan diri, Kepercayaan keberkesanan diri dalam bacaan, Strategi membaca metakognitif, Pemahaman bacaan, Reka bentuk kaedah campuran.

Abstract

The reading comprehension of Saudi learners is generally unsatisfactory when they enroll in universities. However, empirical research on the relationship between self-efficacy sources and reading comprehension is scarce in the EFL context. Furthermore, there is limited research on the relationship between metacognitive reading strategies and reading comprehension using reading self-efficacy as a mediator. This study aimed to identify the hierarchical order of self-efficacy sources and metacognitive reading strategies. Additionally, it intended to determine the level of reading self-efficacy and reading comprehension. Moreover, this study proposed that reading self-efficacy beliefs might mediate the relationship between self-efficacy sources, metacognitive reading strategies, and reading comprehension. The current study employed a mixed-methods correlational research design in which quantitative data using questionnaires was collected by employing proportionate stratified random sampling from 383 Saudi EFL learners. Besides, qualitative data was gathered through semi-structured interviews with six Saudi EFL learners using homogeneous purposeful sampling. Findings indicated that 'mastery experience' was the most reported self-efficacy source, whereas 'physiological state' was least reported. Furthermore, 'global strategies' was the most reported metacognitive reading strategy, in contrast to 'support strategies' which was least reported. Additionally, the majority of the students had a higher level of reading self-efficacy. Also, regarding the reading comprehension level, most of the learners were 'above average' readers. Reading self-efficacy beliefs mediated the relationship between all the self-efficacy sources and reading comprehension except 'physiological state'. Moreover, reading self-efficacy beliefs mediated the relationship between metacognitive reading strategies and reading comprehension. The qualitative findings revealed several factors that were responsible for the influence of self-efficacy sources/metacognitive reading strategies on reading comprehension such as the role of teachers, competitive environment, confidence, time constraints, skimming, visualising, and notes-taking. The findings offer several implications for EFL teachers and policy makers which could prove beneficial for EFL learners in terms of increasing their self-efficacy and improving their metacognitive strategies in reading comprehension.

Keywords: Self-efficacy sources, Reading self-efficacy beliefs, Metacognitive reading strategies, Reading comprehension, Mixed-methods design.

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List of Abbreviations

Abbreviation	Description of Abbreviation
AHSGS	Awang Had Salleh Graduate School
ASE	Academic Self-efficacy
AVE	Average Variance Extracted
CB-SEM	Covariance Based Structural Equation Modelling
CFA	Confirmatory Factor Analysis
CR	Composite Reliability
DV	Dependent Variable
EFL	English as a Foreign Language
EGAP	English for General Academic Purposes
ELT	English Language Teaching
ESAP	English for Specific Academic Purposes
ESL	English as a Second Language
F ²	Effect size
FL	Foreign Language
GL	Global Strategies
GPA	Grade Point Average
GTM	Grammar Translation Method
HTMT	Heterotrait-Monotrait
IELTS	International English Language Testing System
IV	Independent Variable
KSA	Kingdom of Saudi Arabia
L1	First Language
L2	Second Language
LD	Learning Disability
LLSs	Language Learning Strategies

M	Mean
MARSI	Metacognitive Awareness of Reading Strategies Inventory
MCQs	Multiple Choice Questions
ME	Mastery Experience
MoHE	Ministry of Higher Education
MRSI	Metacognitive Reading Strategies Inventory
NLD	Non-Learning Disability
OSORS	Online Survey of Reading Strategies
PET	Preliminary English Test
PLS	Partial Least Square
PS	Physiological State
PSS	Problem-solving Strategies
PYP	Preparatory-Year-Programme
Q ²	Predictive Relevance
QUAL	Qualitative
QUAN	Quantitative
R ²	Coefficient Determination
RC	Reading Comprehension
RHs	Research Hypotheses
ROs	Research Objectives
RQs	Research Questions
SEB	Reading Self-efficacy Beliefs
SCT	Social Cognitive Theory
SD	Standard Deviation
SE	Self-efficacy
SEM	Structural Equation Modeling
SES	Self-efficacy Sources
SILL	Strategy Inventory for Language Learning

SLA	Second Language Acquisition
SORS	Survey of Reading Strategies
SP	Support strategies
SPSS	Statistical Package for the Social Sciences
TOEFL	Test of English as a Foreign Language
TOM	Theory of Metacognition
UK	United Kingdom
USA	United States of America
UTM	University Teknologi Malaysia
UUM	Universiti Utara Malaysia
VE	Vicarious Experience
VIF	Variance Inflation Factor
VP	Verbal Persuasion



CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter first provides the background of the research (see Figure 1.1). Thereafter, problem statement of the research is explained. Based on the problem statement, research objectives, questions and hypotheses are formulated. Following, significance and scope of research are described. Furthermore, conceptual framework is designed and operational definitions are presented. Organisation of the thesis is also explained, while the chapter ends with a summary of the whole chapter.

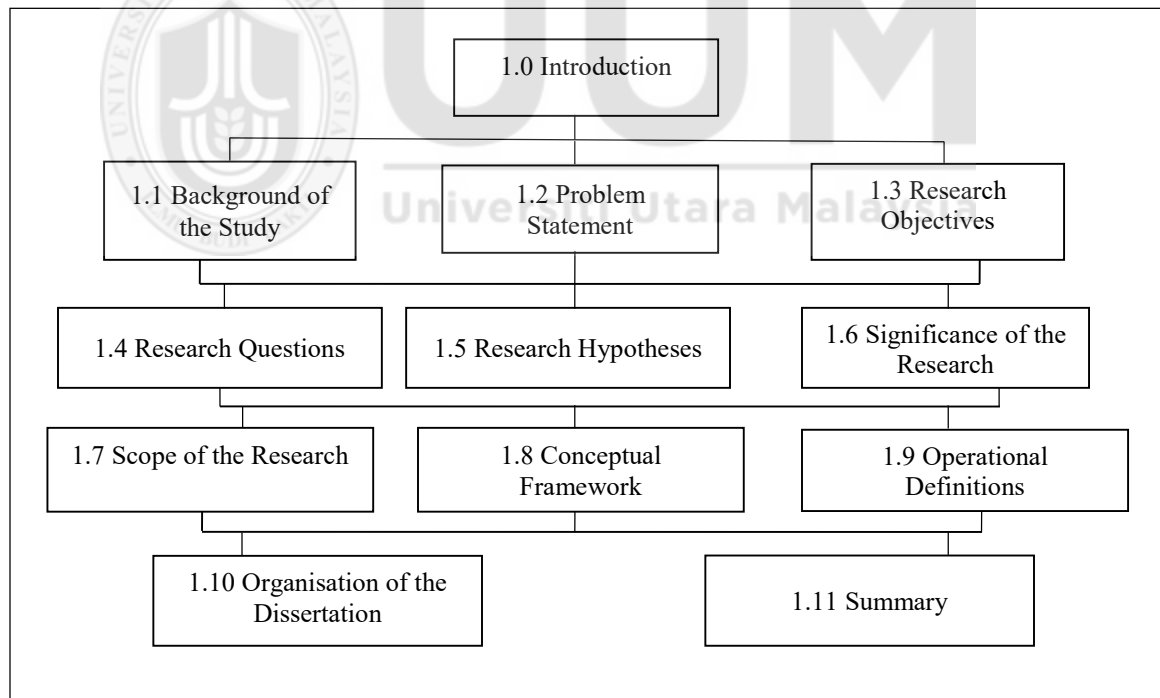


Figure 1.1. The Organisation of Chapter One

1.1 Background of the Study

Academic achievement largely depends on the reading comprehension skills of the learners (Grabe, 1991; Johns, 1981). Also, in higher education, reading comprehension is considered as one of the most indispensable skills (Meniado, 2016). It is utterly essential for the learners to comprehend what they read in order to cope with the demanding subjects offered at a university level (Meniado, 2016). From a global perspective, previous research indicated that EFL learners faced hurdles in reading comprehension (Al Seyabi & Tuzlukova, 2015 in Oman; Chen & Chen, 2015 in Taiwan; Cho & Brutt-Griffer, 2015 in South Korea; Guimba & Alico, 2015 in Philippines; Hamra & Syatriana, 2015 in Indonesia; Mohamed, 2016 in Libya). Likewise, in the context of KSA, when the learners enrol in universities after completing their school education, their reading comprehension level is poor (Al-Qahtani, 2016; Al-Roomy, 2013; Ismail, 2014; Meniado, 2016).

It has been established in ‘social cognitive theory’ (SCT) that learners’ views about their own capabilities to accomplish any task play a significant role in their achievements or failures (Bandura, 1986). In other words, SCT affirmed that self-efficacy beliefs are responsible for individual’s successes and failures in every walk of life (Bandura, 1986; Bandura, 1997; Pajares, 2002). In terms of reading comprehension, the construct of self-efficacy needs attention. In the context of KSA, only few researchers have conducted studies to investigate the relationship between certain kinds of self-efficacy (i.e., general self-efficacy, English self-efficacy, social self-efficacy, and foreign language self-efficacy) and different kinds of achievements (i.e., academic achievement, language achievement, oral achievement) (Al-Hebaish & Mohammad, 2012; Al-Roomy, 2015; Humaida, 2017;

Koura & Al-Hebaishi, 2014; Razek & Coyner, 2014; Saleem, Ali & Ab Rashid, 2018). However, there is a severe dearth of studies related to 'reading self-efficacy beliefs'.

Bandura (1986) affirmed that self-efficacy beliefs originate from their four sources including 'mastery experience', 'vicarious experience', 'verbal persuasion' and 'physiological state' (refer to Section 2.7 for detailed explanation of self-efficacy sources). Mastery experience includes the past experiences of the individual regarding his/her successes and failures. This source of self-efficacy is considered as the most influential as compared to the other three sources. Self-efficacy beliefs get boosted by successes, whereas they get lowered when one faces failures. In addition to one's personal experiences, observation of other individuals' experiences, particularly peers' experiences (vicarious experience) is the second source of self-efficacy beliefs. In other words, one can observe other successful peers and their success can persuade one to believe that one can accomplish similar tasks. Verbal persuasion is regarded as the third source of self-efficacy and it consists of feedback from the significant people in the life of an individual, i.e., parents, peers and teachers. The feedback can influence individual's performance. Lastly, the fourth self-efficacy source, i.e., physiological state refers to anxiety and exhaustion which can affect one's self-efficacy beliefs (Bandura, 1986).

These four hypothesised self-efficacy sources are responsible for generating self-efficacy beliefs in any individual and in turn, self-efficacy beliefs influence individual's performance (Bandura, 1986; Bandura, 1997). In the previous literature, researchers found relationships between self-efficacy sources and various academic variables including

mathematics achievement, English language achievement, French language achievement (Usher & Pajares, 2009; Usher, 2009; Joët, Ellen & Pascal, 2011). However, there is paucity of studies related to the relationship between self-efficacy sources and English reading comprehension. Therefore, the current study aimed to determine the role of self-efficacy sources in reading comprehension by using reading self-efficacy beliefs as a mediating variable.

Other than self-efficacy beliefs, ‘metacognition’ also plays a significant role in reading comprehension (Flavel, 1979; Takallou, 2011; Pei, 2014; Eghlidi, 2014). In general, the term metacognition indicates reflecting upon one’s own thinking and regulating one’s own learning. It is one of the approaches that have been offered and being researched for the effective comprehension of reading. Flavell (1979) presented ‘theory of metacognition’ (TOM) in 1979. According to TOM, metacognition comprises two components, i.e., metacognitive knowledge and metacognitive regulation (Flavell, 1979). Firstly, metacognitive knowledge means attained knowledge about cognitive procedures. In other words, knowledge used to regulate the processes of cognition is called metacognitive knowledge. Secondly, metacognitive regulation refers to self-cognizance and access to strategies that direct learning (e.g., scrutinising difficulty level, a feeling of knowing).

‘Metacognitive reading strategies’ are intentional, carefully planned techniques by which learners scrutinise or control their reading (Sheorey & Mokhtari, 2001). The metacognitive reading strategies taxonomy used in the current study consists of three sorts of strategies including ‘global’, ‘problem-solving’, and ‘support’ strategies (Mokhtari & Sheorey,

2002). Readers employ global reading strategies in order to scrutinise their reading (e.g., guessing the meaning of text, having a purpose in mind, using tables and figures while reading etc). Moreover, readers use problem-solving strategies when they encounter problems while reading a text (e.g., reading slowly, getting back on track after losing concentration, visualising while reading etc). Lastly, support strategies is employed to assist reading (e.g., taking notes, highlighting content, using a dictionary etc) (Huang, Chern, & Lin, 2009; Mokhtari & Sheorey, 2002).

A detailed explanation of the aforementioned metacognitive reading strategies is presented in Section 2.4.1. Numerous researchers affirmed that metacognitive reading strategies (i.e., the independent variable of the current study) enhance reading comprehension performance (i.e., the dependent variable of the current study) of the readers (Al-Sobhani, 2013; Hong-Nam, 2014; Kummin & Rahman, 2010; Magogwe, 2013; Memis & Bozkurt, 2013; Phakiti, 2006; Pressly; Ahmadi, Ismail, & Abdullah, 2013; Tavakoli, 2014; Yuksel & Yuksel, 2012; Zhang & Seepho, 2013). However, there is dearth of research involving the relationship between metacognitive reading strategies and reading comprehension by using reading self-efficacy beliefs as a mediating variable. Thus, the present study aimed to fill this literature gap.

More specifically, the present study aimed to examine the roles of self-efficacy sources/metacognitive reading strategies in reading comprehension among Saudi EFL learners by employing reading self-efficacy beliefs as a mediator.

As indicated at the very start of Section 1.1, reading comprehension level of the Saudi EFL learners is unsatisfactory when they enrol in the university, the next section alludes to the practical issues related to their reading.

1.1.1 Status of Reading in KSA

The government of KSA is spending billions of dollars for English teachers' training, curriculum development, language labs and recruitment of native English speaking teachers (Rahman & Alhaisoni, 2013). However, in KSA, when the students leave their schools, their reading competency is poor (Alrabai, 2016; Al-Seghayer, 2014; Ismail, 2014; Rahman & Alhaisoni, 2013). There are certain objectives regarding teaching English as a foreign language (EFL) in Saudi schools that were set by the Ministry of Education of Saudi Arabia. The main objectives as cited in Rahman and Alhaisoni, (2013) are as follows:

1. To make the students capable enough to learn the four essential English language skills, i.e., listening, speaking, reading and writing.
2. To foster positive attitudes among students towards English learning.
3. To make the students linguistically capable to get advantage from those nations who speak English as a first language, which would result in developing understanding and mutual respect of cultural diversities among nations.
4. To offer the students with such a linguistic foundation that would assist them in transmitting scientific knowledge from other developed countries which in turn would boost the development of the nation.

The IELTS reading results of the year 2017 are shown in the tables below, i.e., Table 1.1 and Table 1.2. Both tables show the poor condition of reading levels of Saudi learners. In the academic reading category, the average score of Saudi learners was the third lowest in the world, i.e., 5.05 out of 9 after Omani learners. The condition was even worse in the general reading category in which the average reading score was 3.90 out of 9, i.e., the lowest in the world. The IELTS scores indicate that the Ministry of education has probably not fulfilled the very first objective, i.e., to make learners capable of acquiring four essential skills of English including reading skills.

Table 1.1

IELTS Test Report of Lowest Academic Reading Scores of 5 Countries in 2017

Place of origin	Reading score
Iraq	5.44
Kuwait	5.08
Saudi Arabia	5.05
Oman	4.98
U.A.E	4.70

Note. Adapted from https://www.ielts.org/teaching-and-research/test-taker-performance_2017.aspx. Copyright 2017 by IELTS.

Table 1.2

IELTS Test Report of Lowest General Reading Scores of 5 Countries in 2017

Place of origin	Reading score
Nepal	5.67
Taiwan	5.61
Japan/Korea	5.53
Thailand	4.83
Saudi Arabia	3.90

Note. Adapted from https://www.ielts.org/teaching-and-research/test-taker-performance_2017.aspx. Copyright 2017 by IELTS.

There are many reasons of poor reading competency among Arab learners. It is worth-mentioning that all the reasons of poor reading competency are related to the fact that English is taught as foreign language in KSA (Alkhaleefah, 2017; Alrabai, 2018a; Alrashidi & Phan, 2015; Khan, 2011). Firstly, they start learning English language from the sixth grade (Al- Hazmi, 2003; Al-Sadan, 2000; Alsaif, 2011; Al-Sughaer, 2009; Mahboob & Elyas, 2014; Sheshsha, 1982; Zaid, 1993). Delayed exposure towards English language learning can be considered as a major factor for their poor reading competence and lack of using reading strategies.

Secondly, the Saudi EFL learners' exposure to English language in their daily environment or at home is limited due to the fact that Arabic is a dominant language in KSA (Alrabai, 2016). They barely get any chance of using English outside their classroom (Alrabai, 2016; Rahman & Alhaisoni, 2013). Although they have internet facility where they can read blogs and online books, they do not take advantage of technology and mostly use Arabic (Alrabai, 2016). A survey was conducted about the reading habits of the Arabs in a publication namely, 'What Arabs Read'. The results of the survey indicated that 85% of the Saudi nationals read only one book a year (Al-Roomy, 2013). There are various researchers who claim that since the beginning of the education, the level of reading in English among Saudi students is poor. Al-Shalan (2007) claimed that there are several causes of the poor reading level among school learners, such as lack of reading at home, watching television, and playing video games for long hours. Al-Shalan (2007) was also of the view that the base of reading is built at home instead of school. He further suggests that parents should develop reading habit among their children at home by presenting

reading as an interesting activity just like other activities. Thus, due to less exposure to English language, their reading gets affected and consequently, they lack in using reading strategies.

Thirdly, the major causes of incompetence in reading English among the Saudi schools' learners are below standard knowledge of the teachers and the teaching approach adopted in the government schools (Al-Jarf, 2008; Alsaif & Milton, 2012; Rabab'ah, 2005; Zainol Abidin, Pour-Mohammadi, & Alzwari, 2012). The approaches adopted by teachers in teaching English language are not appropriate. Mostly, teachers adopt grammar-translation method (GTM) to teach English language. In this method, they focus on the memorisation of the grammatical rules, vocabulary and word-to-word translation of the passages for reading and consequently little attention is given to the use of reading strategies (Al-Seghayer, 2011). Al-Jarf (2007) was also of the view that as a result of the poor reading instruction, the growth of the metacognitive reading capabilities gets affected among Saudi learners.

Fourthly, little amount of time is apportioned to the subject of English in the curriculum of the government schools, as shown in Table 1.3. The primary level learners study English two lessons a week and each lesson is of 45-minutes duration, while the intermediate and secondary level learners study English four (45-minutes) lessons a week (Al-Sadan, 2000). Little amount of time allocated to teaching of English language is also considered as a major cause of poor reading competence and the lack of using reading strategies by Saudi learners.

Table 1.3

The Number of Weekly Periods Allocated to English at Primary Level (Grades 1 to 8), Intermediate Level (Grades 9 & 10) and Secondary Level (Grades 11 & 12) in KSA

Education level	Primary Education								Intermediate Education		Secondary Education	
	Grade	1	2	3	4	5	6	7	8	9	10	11
English Weekly Periods (45 minutes a period)	-	-	-	-	-	2	2	2	4	4	4	4

Note. Adapted from “Educational assessment in Saudi Arabian schools” by I.A. Al-Sadan. 2000, *Assessment in Education: Principles, Policy & Practice*, 7(1), 143-155. Copyright 2000 by Taylor & Francis Online.

Lastly, the syllabus of English is not up to the mark. Mahboob and Elyas (2014) reviewed an English textbook being taught in Saudi schools titled ‘English language for Saudi Arabia: 1st year secondary term 1: Student’s book.’ It was revealed that several linguistic features did not match Standard English and many of them were misused. Further, Rahman and Alhaisoni (2013) were of the viewpoint that the selection of English textbooks in schools and universities of KSA by higher education authorities and syllabus designers is not appropriate. Therefore, inappropriate syllabus can also be considered as one of the causes of poor reading competence of the Saudi learners.

In the above paragraphs, practical problems regarding reading skills of the Saudi school learners were explained. Thus, the level of reading comprehension competence of those learners still remains unsatisfactory when they reach the university level (Ismail, 2014). Al-Hazmi (2005) elucidated that there is an exigency for using English in many universities due to the fact that the government wants to keep the Saudi learners abreast of recent knowledge and competence in terms of getting employment globally. Thus, to enhance the

English proficiency level of Saudi learners in all four skills of English language, they need to attend Preparatory-Year-Programme (PYP) before they enter the university to pursue undergraduate studies (Al-Shumaimeri, 2013). The next section elucidates about the PYP in Saudi Universities.

1.1.1.1 Preparatory-Year-Programme (PYP) in Saudi Universities

By observing the demands of Saudi learners to undergo higher education and due to poor English language proficiency, the Saudi Ministry of Higher Education (MoHE) has decided to initiate the PYP in all Saudi universities. PYP is supposed to enhance skills of English language that will make learners eligible and competent enough to pursue their higher education in any field of their interest. This program is particularly developed to enhance general English language skills of school leavers who are ready to start their university education. Besides English, there are other subjects that are also taught in PYP, i.e., courses related to university skills, science and mathematics (Alblowi, 2016).

PYP is a one-year programme and divided into two semesters. Learners learn English for 20 hours weekly, which means, they study English for 600 hours in the whole PYP. In the first semester, learners are taught a general English skill which is denoted as English for General Academic Purposes (EGAP). In the second semester, learners are taught English related to specific subjects which is referred as English for Specific Academic Purposes (ESAP) (Alblowi, 2016).

The main aim of PYP is to develop and enrich basic skills of English language among learners from secondary schools who are about to pursue their higher education. All the

contents of subjects in higher education are in English language, thus, English language is considered as the most important subject. PYP also intends to enhance speaking skill and reading comprehension performance of the Saudi learners particularly. Therefore, competent English teachers are employed specifically for this programme and the majority of them are native English speakers. Furthermore, PYP is also developed due the reason that it contributes to the fulfilment of the educational aims of the KSA (Alshumaimeri, 2011). Alseweed and Daif-Allah (2013) piloted a study to determine the efficiency of PYP. The results indicated that 76% of the PYP learners and 87% of the PYP teachers think that PYP is effective in developing fundamental English language skills among learners.

The IELTS scores and the practical reading problems of Saudi school learners, as mentioned in Section 1.1.1, reveal that the Saudi Ministry of education has probably not fulfilled all the four objectives, particularly the first objective, i.e., to make the school learners capable of acquiring the four essential skills of English including reading. Therefore, when the learners leave the school, their reading competency is poor (Alrabai, 2016; Al-Seghayer, 2014; Ismail, 2014). The next section discusses the problem statement of the current study.

1.2 Problem Statement

It is anticipated that Saudi EFL learners should be proficient in the use of English language when they reach the university level, since they have been learning English language for at least six years in schools (Alhawsawi, 2014; Al-Johani, 2009; Rajab, 2013). However, their level of reading in English language still remains unsatisfactory when they reach the

university level (Al-Qahtani, 2010, 2016; Al-Roomy, 2013; Ismail, 2014). Regrettably, the level of reading of Saudi learners is extremely low, as revealed by the International English Language Testing Service's (IELTS) (2017) Report (refer to Table 1.1 and 1.2 in Section 1.1.1 to see the detailed report). Out of nine bands, average bands acquired by the Saudi learners in reading skills were 5.05, i.e., the third lowest in the world and 3.90, i.e., the lowest in the world in academic and general categories respectively.

There are many researchers who affirmed that the poor level of reading of Saudi learners after the completion of school education is due to the fact that they memorise and do rote learning just to pass the exam and therefore, reading strategies are being neglected (Alkubaidi, 2014; Almutairi, 2008; Alrabai, 2014b, 2016; Al-Seghayer, 2014; Elyas & Picard, 2010; Fareh, 2010; Rajab, 2013). Al-Jarf (2007) declared that Saudi learners do not excel in reading due to the non-challenging reading activities and, as a consequence, the development of cognitive and metacognitive capabilities is affected. It can be speculated from the arguments of the above studies that the use of reading strategies by the Saudi learners is limited as they just memorise everything to pass the exams due to the fact that English is taught and used as a foreign language in KSA (Alkhaleefah, 2017; Alrabai, 2018a; Alrashidi & Phan, 2015; Khan, 2011).

In spite of the crucial role of metacognitive reading strategies in reading comprehension, Saudi EFL learners' usage of metacognitive reading strategies is limited as stated above. The use of metacognitive strategies was recommended by several researchers to enrich the comprehension of reading (Eilers & Pinkley, 2006; Jitendra, Burgess, & Gajria, 2011; Law,

2009; Poole, 2011). At a very tender age of eight to ten years, metacognitive skills or strategies start developing among children and these skills keep on developing in the coming years (Veenman & Spaans, 2005; Veenman, Wilhelm & Beishuizen, 2004). However, in the Saudi Arabian context, firstly, the learners are not given much attention regarding metacognitive reading strategies; they are, on the other hand, taught non-challenging strategies for reading purposes till the end of the secondary school level (Al-Jarf, 2007). Thus, it can be speculated that they are not exposed to metacognitive knowledge till the age of 18. Secondly, they start learning English language from sixth grade (Al-Johani 2009; Al-Mansour, 2009; Gawi, 2012). As a consequence of these two major problems, when the Saudi EFL learners enrol in a university, generally they are quite weak in reading and comprehending the text because they apply reading strategies that are helpful in surface reading only (Hermida, 2009; Ismail, 2014).

From the above arguments, it can be speculated that eight to ten years of Saudi school learners for learning or developing metacognitive skills is probably not utilised effectively. Thus, to enhance the level of English proficiency of Saudi learners in all the four skills of English language, they need to attend 'Preparatory-Year-Programme' (PYP) of one year duration, before they enrol in the university to pursue undergraduate studies (Al-Shumaimeri, 2013). This situation has compelled the researcher to conduct the research on Saudi EFL university learners to examine their reading comprehension level as well as their awareness of using metacognitive reading strategies. As stated above, Saudi EFL learners' usage of reading strategies is limited, therefore, it is imperative to determine the most and least used reading strategies by them. Hence, the current study aimed to determine

the hierarchical order of the three strategies (i.e., global, problem-solving, & support strategies) to determine the most and least used strategies by Saudi EFL learners.

Research indicates that readers embark on reading tasks persistently if they have faith in their capability to comprehend it effectively (Solheim, 2011; Unrau et al., 2018; Waleff, 2010). According to Bandura (1986), self-efficacy denotes learners' opinions in their ability to obtain success and fulfil a job to reach a nominated level of accomplishment. When confronting challenges, self-efficacy affects our judgments, behaviours and efforts. Pajares (2002) has modified Bandura's definition; he was also of the view that the beliefs of self-efficacy affect all parts of the lives of people, including efficiency in doing tasks, getting optimistic or pessimistic during a task, the amount of effort being put in into any task, their level of self-confidence or self-efficacy. Both definitions show that we can use self-efficacy as a variable for undertaking research in any field of life. Moreover, self-efficacy is a crucial variable in the field of research as evident from findings of Artino's (2012) study. He affirmed that out of nine frequently researched psycho-social variables (i.e., academic-related skills, academic goals, general self-concept, perceived social support, contextual influences, academic self-efficacy, institutional commitment, achievement motivation, and social involvement), academic self-efficacy is considered as the most powerful predictor of academic accomplishments.

In the context of Saudi Arabia, researchers focused on determining the relationship between certain kinds of self-efficacy (foreign language self-efficacy, English self-efficacy, general self-efficacy and social self-efficacy) and different kinds of performances

(language performance, academic performance, oral performance) (Al-Hebaish & Mohammad, 2012; Al-Roomy, 2015; Alrabai, 2018b; Humaida, 2017; Koura & Al-Hebaishi, 2014; Razek & Coyner, 2014; Saleem, Ali & Ab Rashid, 2018). However, there is dearth of studies in terms of reading self-efficacy generally and the relationship between reading self-efficacy and reading comprehension particularly.

As a consequence of the crucial role played by self-efficacy beliefs in the academic achievement and limited research in terms of reading self-efficacy in KSA, the researcher decided to examine the potential roles of self-efficacy sources and metacognitive reading strategies in reading comprehension among Saudi EFL learners by employing reading self-efficacy beliefs as a mediating variable. Moreover, the current study aimed to determine the level (high/ low) of reading self-efficacy among Saudi EFL learners. The determination of their reading self-efficacy level is crucial as it would let the EFL teachers know about the current level of Saudi EFL learners.

Several studies have been conducted to investigate the relationship between self-efficacy beliefs and reading comprehension. The results of those studies indicated that there was a positive significant correlation between them (Al Ghraibeh, 2014; Galla et al., 2014; Guthrie et al., 2013; Jones et al., 2012; Klassen, 2010; Lee & Jonson-Reid 2016; Liem et al., 2008; Osman et al., 2016; Piercey, 2013).

Similarly, a number of research studies have been conducted to determine the relationship between metacognitive reading strategies and self-efficacy beliefs (Ahmadian & Pasand,

2017; Kargar & Zamanian, 2014; Keskin, 2014; Li & Wang, 2010; Naseri & Zaferanieh, 2012; Shang, 2010; Zare & Mobarakeh, 2011). The findings of the above mentioned studies showed a significant relationship between metacognitive reading strategies and self-efficacy beliefs.

Moreover, a decent amount of research has been conducted regarding the sources of self-efficacy in academic fields on a diverse range of variables and the findings revealed significant relationships (Arslan, 2013; Bryant, 2017; Butz & Usher, 2015; Cantrell, Correll, Clouse, Creech, Bridges, & Owens, 2013; Fong & Krause, 2014; Lin & Tsai, 2018; Lin, 2016; Phan, 2012; Phan & Ngu, 2016; Williams, 2017; Yurt, 2014; Zarei & Naghdi, 2017). However, there is a dearth of research in terms of determining the relationship between self-efficacy sources and reading comprehension. This paucity of research has compelled the researcher to conduct research on this less explored area. Moreover, the current study aimed to determine the hierarchical order of the four hypothesised self-efficacy sources by Bandura (1986) to know the respondents' degree of reliance on these self-efficacy sources. The ranking of self-efficacy sources would allow the EFL learners and teachers to know that which self-efficacy sources need more attention and they might incorporate less reported self-efficacy source in them to boost reading self-efficacy and improve reading comprehension performance in future.

Regarding the literature gap, three gaps were filled. Firstly, there is scarcity of research studies on the relationship between self-efficacy sources and reading comprehension. Consequently, this literature gap is filled in the present study by conducting research on

the two variables, i.e., self-efficacy sources and reading comprehension for the very first time according to researcher's best knowledge. Secondly, self-efficacy sources and metacognitive reading strategies act as independent variables in the same model in this study. Thirdly, reading self-efficacy acts as a mediating variable between metacognitive reading strategies and reading comprehension.

Also, an obvious theoretical gap is addressed in the present study. Previous studies used social cognitive theory (SCT) to determine the association between self-efficacy sources and several variables (Bryant, 2017; Butz & Usher, 2015; Cantrell et al., 2013; Fong & Krause, 2014; Lin & Tsai, 2018; Lin, 2016; Phan & Ngu, 2016; Williams, 2017; Yurt, 2014; Zarei & Naghdi, 2017). However, a limited research has been conducted in determining the association between self-efficacy sources and reading comprehension by employing SCT. Therefore, the current study aimed to address this theoretical gap.

Moreover, there is paucity of research on the roles of self-efficacy sources and reading self-efficacy beliefs in reading comprehension in Saudi Arabia. Thus, this study aimed to fill this contextual gap as well by conducting research on aforementioned variables.

Many researchers recommended to incorporate both quantitative and qualitative research designs to get a better insight of the variables involved in the current study (Poole, 2009; Tsang, Hui & Law, 2012; Usher & Pajares, 2008). Therefore, the current study was conducted using a mixed-methods research design to fill this methodological gap.

To sum up, this study was conducted on Saudi EFL learners. It investigated the sources of self-efficacy, the frequency of the usage of metacognitive reading strategies, the level of reading self-efficacy beliefs and their reading comprehension level. It also attempted to determine the potential roles of self-efficacy sources/metacognitive reading strategies in reading comprehension by employing reading self-efficacy beliefs as a mediator. It is expected that a better insight regarding the use of metacognitive reading strategies can be attained through this study which in turn can improve EFL learners' ability to read the text efficiently and to become more self-efficacious learners.

1.3 Research Objectives

The following research objectives were formulated for the current study:

1. To identify the hierarchical order of the four self-efficacy sources reported by Saudi EFL learners.
2. To identify the hierarchical order of the usage of three metacognitive reading strategies reported by Saudi EFL learners.
3. To identify the level (high/low) of reading self-efficacy beliefs among Saudi EFL learners.
4. To identify the level of reading comprehension of Saudi EFL learners.
5. To determine the extent of correlation between four self-efficacy sources and reading self-efficacy beliefs among Saudi EFL learners.
 - a. To determine the extent of correlation between mastery experience and reading self-efficacy beliefs among Saudi EFL learners.

- b. To determine the extent of correlation between vicarious experience and reading self-efficacy beliefs among Saudi EFL learners.
 - c. To determine the extent of correlation between verbal persuasion and reading self-efficacy beliefs among Saudi EFL learners.
 - d. To determine the extent of correlation between physiological state and reading self-efficacy beliefs among Saudi EFL learners.
6. To determine the extent of correlation between three metacognitive reading strategies and reading self-efficacy beliefs of Saudi EFL learners.
 - a. To determine the extent of correlation between global metacognitive reading strategies and reading self-efficacy beliefs of Saudi EFL learners.
 - b. To determine the extent of correlation between problem-solving metacognitive reading strategies and reading self-efficacy beliefs of Saudi EFL learners.
 - c. To determine the extent of correlation between support metacognitive reading strategies and reading self-efficacy beliefs of Saudi EFL learners.
7. To determine the extent of correlation between reading self-efficacy beliefs and reading comprehension of Saudi EFL learners.
8. To determine the mediating role of reading self-efficacy beliefs between four self-efficacy sources and reading comprehension of Saudi EFL learners.
9. To determine the mediating role of reading self-efficacy beliefs between three metacognitive reading strategies and reading comprehension of Saudi EFL learners.
10. To explore the Saudi EFL learners' perspectives on the influence of self-efficacy sources and metacognitive reading strategies on their reading comprehension.

1.4 Research Questions

The research questions of the current study are as follows:

1. What is the hierarchical order of the four self-efficacy sources reported by Saudi EFL learners?
2. What is the hierarchical order of the usage of three metacognitive reading strategies reported by Saudi EFL learners?
3. What is the level (high/low) of reading self-efficacy beliefs among Saudi EFL learners?
4. What is the level of reading comprehension of Saudi EFL learners?
5. To what extent are self-efficacy sources correlated to reading self-efficacy beliefs among Saudi EFL learners?
 - a) To what extent is mastery experience correlated to reading self-efficacy beliefs among Saudi EFL learners?
 - b) To what extent is vicarious experience correlated to reading self-efficacy beliefs among Saudi EFL learners?
 - c) To what extent is verbal persuasion correlated to reading self-efficacy beliefs among Saudi EFL learners?
 - d) To what extent is physiological state correlated to reading self-efficacy beliefs among Saudi EFL learners?
6. To what extent are metacognitive reading strategies correlated to reading self-efficacy beliefs among Saudi EFL learners?
 - a. To what extent are global metacognitive reading strategies correlated to reading self-efficacy beliefs among Saudi EFL learners?

- b. To what extent are problem-solving metacognitive reading strategies correlated to reading self-efficacy beliefs among Saudi EFL learners?
 - c. To what extent are support metacognitive reading strategies correlated to reading self-efficacy beliefs among Saudi EFL learners?
7. To what extent are reading self-efficacy beliefs correlated to reading comprehension of Saudi EFL learners?
8. To what extent do reading self-efficacy beliefs mediate the correlation between four self-efficacy sources and reading comprehension of Saudi EFL learners?
9. To what extent do reading self-efficacy beliefs mediate the correlation between metacognitive reading strategies and reading comprehension of Saudi EFL learners?
10. What are the Saudi EFL learners' perspectives on the influence of self-efficacy sources and metacognitive reading strategies on their reading comprehension?

1.5 Research Hypotheses

The following research hypotheses were generated after the review of relevant literature:

H₁: There is a significant relationship between mastery experience and reading self-efficacy beliefs among Saudi EFL learners.

H₂: There is a significant relationship between vicarious experience and reading self-efficacy beliefs among Saudi EFL learners.

H₃: There is a significant relationship between verbal persuasion and reading self-efficacy beliefs among Saudi EFL learners.

H₄: There is a significant relationship between physiological state and reading self-efficacy beliefs among Saudi EFL learners.

H5: There is a significant relationship between global metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

H6: There is a significant relationship between problem-solving metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

H7: There is a significant relationship between support metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

H8: There is a significant relationship between reading self-efficacy beliefs and reading comprehension among Saudi EFL learners.

H9: Reading self-efficacy beliefs mediate the relationship between mastery experience and reading comprehension among Saudi EFL learners.

H10: Reading self-efficacy beliefs mediate the relationship between vicarious experience and reading comprehension among Saudi EFL learners.

H11: Reading self-efficacy beliefs mediate the relationship between verbal persuasion and reading comprehension among Saudi EFL learners.

H12: Reading self-efficacy beliefs mediate the relationship between physiological state and reading comprehension among Saudi EFL learners.

H13: Reading self-efficacy beliefs mediate the relationship between global metacognitive reading strategies and reading comprehension among Saudi EFL learners.

H14: Reading self-efficacy beliefs mediate the relationship between problem-solving metacognitive reading strategies and reading comprehension among Saudi EFL learners.

H15: Reading self-efficacy beliefs mediate the relationship between support metacognitive reading strategies and reading comprehension among Saudi EFL learners.

1.6 Significance of the Study

The study aimed to investigate the roles of self-efficacy sources/metacognitive reading strategies in reading comprehension among Saudi EFL learners by employing reading self-efficacy as a mediator. It is hoped that this study would be able to give awareness about the use of metacognitive reading strategies among the Saudi EFL learners. It would be beneficial for the Saudi EFL university learners specifically because the review of literature revealed that there is a lack of reading strategies while learning English in schools (Alkubaidi, 2014; Almutairi, 2008; Alrabai, 2014b, 2016; Al-Seghayer, 2014; Elyas & Picard, 2010; Fareh, 2010; Rajab, 2013). Therefore, they would come to know about their current strategies and maybe in the future they would use better strategies by raising their awareness of metacognitive strategies. Similarly, the present study could be equally beneficial for the EFL Arab learners of other countries because the learners in the Middle-East share almost the same cultural and educational backgrounds with EFL learners in KSA.

Furthermore, this research might help the English language teachers of KSA as well as those in other countries where English language is taught as a foreign language. Hopefully, the results of the research may evoke the teachers to adopt metacognitive reading strategies in their reading pedagogy and utilise the efficient ones in their class in order to improve reading comprehension performance among their students.

Additionally, the findings of the current research could aid the Saudi educational policy makers in reconsidering the current policies and upgrading the presently used teaching pedagogies as well as English language curriculum so that the teaching of metacognitive

reading strategies can be incorporated into the curriculum. This can potentially influence the strategic competence development among Saudi EFL learners.

Moreover, it is expected that the outcomes of this research could be beneficial in enhancing EFL teachers' awareness and knowledge of their students' psychological attributes and necessities during the language learning development process. Hence, EFL learners could be provided with appropriate support by teachers that could help them in boosting their reading comprehension performance by imparting reading self-efficacy beliefs in them. Particularly, this research would be helpful for both EFL learners and instructors to get knowledge about self-efficacy beliefs and their vital role in reading comprehension.

Significantly, it is anticipated that the current research would make a contribution by adding valuable findings into the body of literature. Hopefully, it would provide a baseline for future research on reading comprehension in terms of reading self-efficacy beliefs generally and self-efficacy sources particularly. By reviewing literature, it was found that a limited research has been conducted so far to determine the relationship between self-efficacy sources and reading comprehension of the learners. Also, it was revealed that there is dearth of research in which self-efficacy sources and metacognitive reading strategies are placed as independent variables in the same model. Thus, it is worthy to investigate the roles of self-efficacy sources/metacognitive reading strategies in reading comprehension instead of investigating self-efficacy sources alone. Consequently, three literature gaps are filled in the present study. Firstly, the relationship between two variables, i.e., self-efficacy sources and reading comprehension is determined for the very first time according to

researcher's best knowledge. Secondly, self-efficacy sources and metacognitive reading strategies are introduced as independent variables in the same model for the very first time according to the best of researcher's belief. Thirdly, many past studies found the relationship between metacognitive reading strategies and reading comprehension. However, the current study is different from past studies as it investigated the role of metacognitive reading strategies in reading comprehension by using self-efficacy beliefs as a mediating variable.

Moreover, the current research fills a theoretical gap as well. For instance, social cognitive theory (SCT) was used by previous researchers in determining the relationship between self-efficacy sources and various kinds of variables (Bryant, 2017; Butz & Usher, 2015; Cantrell et al., 2013; Fong & Krause, 2014; Lin & Tsai, 2018; Lin, 2016; Phan & Ngu, 2016; Williams, 2017; Yurt, 2014; Zarei & Naghdi, 2017). However, the usage of SCT in determining the relationship between self-efficacy sources and reading comprehension is still limited. Therefore, an apparent theoretical gap is addressed in the current study.

Numerous researchers suggested to employ both quantitative and qualitative approaches in conducting research on the current study's variables. For instance, it was suggested that qualitative research needs to be conducted to explore the self-efficacy variable in more depth as survey research lacks in-depth inquiry of the phenomenon (Raofi, Tan & Chan, 2012; Tsang et al., 2012). Likewise, Usher and Pajares (2008) recommended a mixed-methods approach in order to determine the association between self-efficacy sources and self-efficacy beliefs. Moreover, Poole (2009) recommended that more qualitative-based

research ought to be conducted regarding reading strategies. Hence, this study employed a mixed-methods research design involving both survey and interviews in order to fill this methodological gap.

1.7 Scope of the Study

This research mainly attempted to investigate the roles of self-efficacy sources/metacognitive reading strategies in reading comprehension among Saudi EFL learners by using reading self-efficacy beliefs as a mediator. There are four English language skills including listening, speaking, reading and writing. The current research just focused on reading skill and more specifically on reading comprehension (dependent variable). Moreover, self-efficacy beliefs (mediating variable) and self-efficacy sources (independent variable) are precisely related to reading. In addition, regarding metacognitive reading strategies (independent variable), the current research employed a taxonomy presented by Mokhtari and Sheorey (2002). This taxonomy consists of three kinds of strategies namely global, problem-solving, and support strategies.

Government universities were chosen as a part of this research. In every government university, there is a separate department of PYP. Thus, only PYP was included as a part of research. Regarding the number of universities, this research was constrained to eight universities (King Saud University, Qassim University, Shaqra University, Majmaah University, King Saud Bin AbdulAziz University for Health Sciences, Al-Imam Mohammed Ibn Saud Islamic University, Prince Sattam Bin AbdulAziz University, Saudi Electronic University). Moreover, all the participants of the current study were learning

English as a foreign language (EFL). Thus, the findings of this research could not be generalised to English as a second language (ESL) learners or English language native speakers.

1.8 Conceptual Framework

The current study involves two independent variables, self-efficacy sources (i.e., mastery experience, vicarious experience, verbal persuasion, and physiological state) and metacognitive reading strategies (i.e., global, problem-solving, and support strategies), a mediating variable (i.e., reading self-efficacy beliefs), and a dependent variable (i.e., reading comprehension) as shown in Figure 1.2.

Social cognitive theory (SCT) affirmed that self-efficacy sources generate self-efficacy beliefs among individuals which in turn affect performance of the individuals (Bandura, 1986). Moreover, theory of metacognition (TOM) asserted that learners' self-awareness and self-regulation regarding their learning processes assist them to perform their learning tasks effectively. On the basis of SCT and TOM, the current study proposed a conceptual framework in which reading self-efficacy sources and metacognitive reading strategies affected reading self-efficacy beliefs which in turn affected the reading comprehension performance of the Saudi EFL learners.

In order to test the formulated conceptual framework, the current study employed a mixed-methods research design. In the quantitative phase, a correlational research design was used, where a questionnaire was the major instrument to collect the data regarding

independent and mediating variables and a MCQs reading comprehension test was used to collect data related to dependent variable. Additionally, in the qualitative phase, semi-structured interviews were conducted to get a deeper perspective of the phenomena.



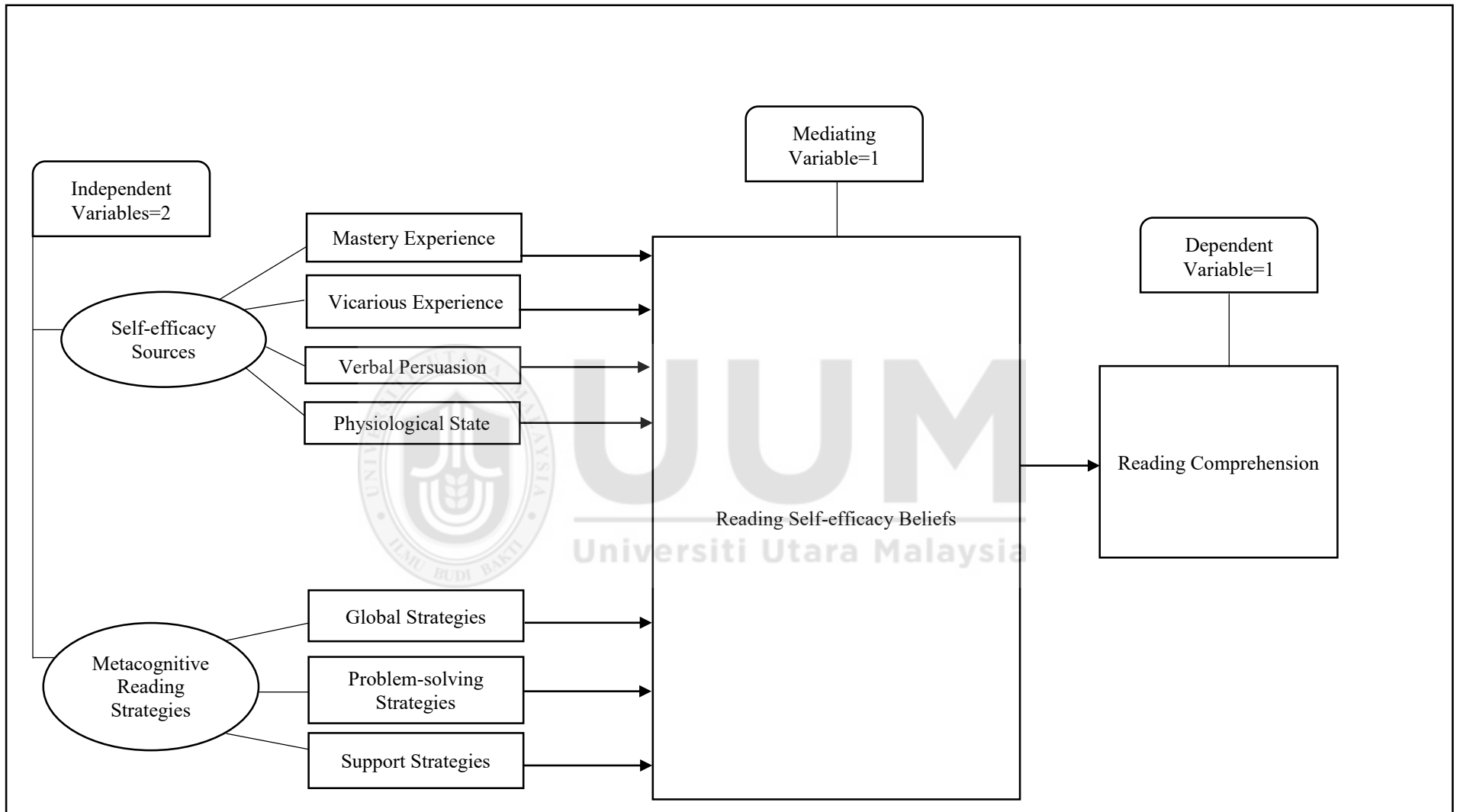


Figure 1.2. Conceptual Framework of the Study

1.9 Operational Definitions of Terms

The terms used throughout the thesis are defined as follows:

1.9.1 Reading Self-efficacy Beliefs

Reading self-efficacy beliefs denote learner's appraisals about their reading capabilities, i.e., how confident they are about achieving a specific reading task (Wigfield, Guthrie, Tonks & Perencevich, 2004). In the current research, reading self-efficacy beliefs refer to Saudi EFL learners' evaluations related to their reading skills.

1.9.2 Self-efficacy Sources

Those intellectual and environmental sources from which self-efficacy beliefs are originated among individuals are called self-efficacy sources, i.e., mastery experience, vicarious experience, verbal persuasion and physiological state (Bandura, 1997). Hence, in the current research, self-efficacy sources refer to four hypothesised sources by Bandura from which reading self-efficacy beliefs are generated among Saudi EFL learners.

1.9.3 Mastery Experience

Mastery experience refers to the previous accomplishments of an individual from which self-efficacy beliefs of an individual gets influenced (Bandura, 1977). In the current study, it refers to the previous reading accomplishments of Saudi EFL learners.

1.9.4 Vicarious Experience

Vicarious experience refers to the observation of the performances of others including peers, authority, and parents. This observation influences individual's self-efficacy beliefs (Bandura, 1977). In the current study, it refers to the observation of the reading performances of others by Saudi EFL learners.

1.9.5 Verbal Persuasion

Verbal persuasion refers to the feedback related to individual's abilities from important people in individual's life, i.e., teachers, parents, and peers. This feedback influences individual's self-efficacy beliefs (Bandura, 1977). In the current study, it refers to the feedback related to reading abilities of Saudi EFL learners from important people in their life.

1.9.6 Physiological State

Physiological state refers to anxiety, stress, and fatigue among an individual which influences the self-efficacy beliefs of an individual (Bandura, 1977). In the current study, it refers to anxiety, stress, and fatigue among Saudi EFL learners while doing reading tasks.

1.9.7 Metacognition

Harris and Hodges (1995) defined metacognition as the awareness and knowledge of one's mental processes such that one can monitor, regulate and direct them to a desired goal. In the current research context, metacognition refers to the awareness and knowledge of the

mental processes of the Saudi EFL learners so that they can supervise, control and guide them to a specific goal.

1.9.8 Metacognitive Reading strategies

Metacognitive strategies for reading are “intentional, carefully planned techniques by which learners monitor or manage their reading” (Sheorey & Mokhtari, 2001, p. 6). In the current study, metacognitive reading strategies are deliberately and prearranged reading strategies that are used by Saudi EFL learners to supervise and control their reading.

1.9.9 Global Reading Strategies

Global reading strategies are those deliberate, cautiously planned techniques by which readers scrutinise their reading, i.e., previewing the text, employing typographical aids to assist reading process, establish purpose of reading, etc. (Mokhtari & Sheorey, 2002). In the current study, it refers to the usage of these strategies by Saudi EFL learners.

1.9.10 Problem-solving Reading Strategies

Problem-solving reading strategies are the techniques and procedures that readers employ when dealing directly with the text. These are specified, focused techniques being employed when difficulties arise in understanding information present in the text, i.e., adjusting reading pace according to the situation, reading the text again for better comprehension, guessing unknown words' meaning, etc. (Mokhtari & Sheorey, 2002). In the current study, it refers to the usage of these strategies by Saudi EFL learners.

1.9.11 Support Reading Strategies

Support reading strategies are basic support strategies which are meant to assist the reader in reading comprehension, i.e., underlining the information, taking notes, using a dictionary, etc. (Mokhtari & Sheorey, 2002). In the current study, it refers to the usage of these strategies by Saudi EFL learners.

1.9.12 Reading Comprehension

Reading comprehension refers to building bridges between the new and the known or between the text and the reader's knowledge (Pearson & Johnson, 1978). Thus, in the current study, it refers to Saudi EFL learners' reading ability to interact between text and their knowledge.

1.9.13 Reading Comprehension Performance

Reading comprehension performance in the current study refers to the performance of Saudi EFL learners in an IELTS MCQs reading comprehension test.

1.9.14 Foreign Language

Based on Ellis' (1994) definition of second language, Foreign Language (FL) is the language that is spoken by a speaker who is not native and lives in a setting where the foreign language is not the main means of interaction. Therefore, in the Saudi Arabian context, English is a foreign language as the Saudis are not native English speakers and also they live in a setting where English is not the main means of communication (Alkhaleefah, 2017; Alrabai, 2018a; Alrashidi & Phan, 2015; Khan, 2011).

1.9.15 English as a Foreign Language

English as a Foreign Language (EFL) denotes to the settings in which the learners learning English do not have ready-made settings for interaction outside the classroom (Brown, 2001). The respondents of the current study, i.e., Saudi EFL learners learn English language only in the classroom. Outside the classroom, they use their first language, i.e., Arabic.

1.10 Organisation of Thesis

This thesis is divided into five chapters as follows (see Figure 1.3):

Chapter One (Introduction) begins with a general overview of the study to let the reader know about the rationale of conducting this study as well as the variables involved in it. Also, it provides the status of reading in Kingdom of Saudi Arabia and also the role of PYP in improving reading performance. Furthermore, problem statement is stated in detail. Moreover, research objectives, questions and hypotheses are formulated on the basis of research problem. Also, significance of the study, scope of the study, conceptual framework and operational definitions of terms are described in this chapter.

Chapter Two (Literature Review) starts with definitions and models of reading. Moreover, the concepts of metacognition and metacognitive reading strategies are described. Additionally, reading self-efficacy beliefs and reading self-efficacy sources' are explained. In addition, recent studies on the relationships between self-efficacy sources and reading self-efficacy beliefs, metacognitive reading strategies and reading self-efficacy beliefs, reading self-efficacy beliefs and reading comprehension are presented in detail. Lastly, on

the basis of aforementioned relationship studies, hypotheses and theoretical framework are developed.

Chapter Three (Research Methodology) elucidates the techniques and procedures that are used in the current study. It also explains the research design selected for this study. Furthermore, sampling and data collection instruments are explained. Last but not the least, it elucidates the procedures involved in the collection as well as analysis of the data.

Chapter Four (Research Findings and Discussion) consists of two major sections, i.e., ‘quantitative data’ and ‘qualitative data’. The first section consists of findings of quantitative research questions. Also, it presents several tests to ensure the validity and reliability of the instruments in the measurement model. Moreover, some other research procedures, including ‘coefficient of determination’, ‘assessment of effect size’, and ‘assessment of predictive relevance’ are explained. At the end of the first section, the findings of quantitative data were discussed in the light of previous literature. The second section (i.e., qualitative data) contains the findings of qualitative research question. In the end, the findings of qualitative research question are discussed with reference to the past literature.

Chapter Five (Conclusions and Recommendations) sums up the whole study. It provides the summary of the major findings. It offers contributions of this study as well as implications for teachers, learners and policy makers. Finally, it states limitations of this research and offers suggestions for future researchers.

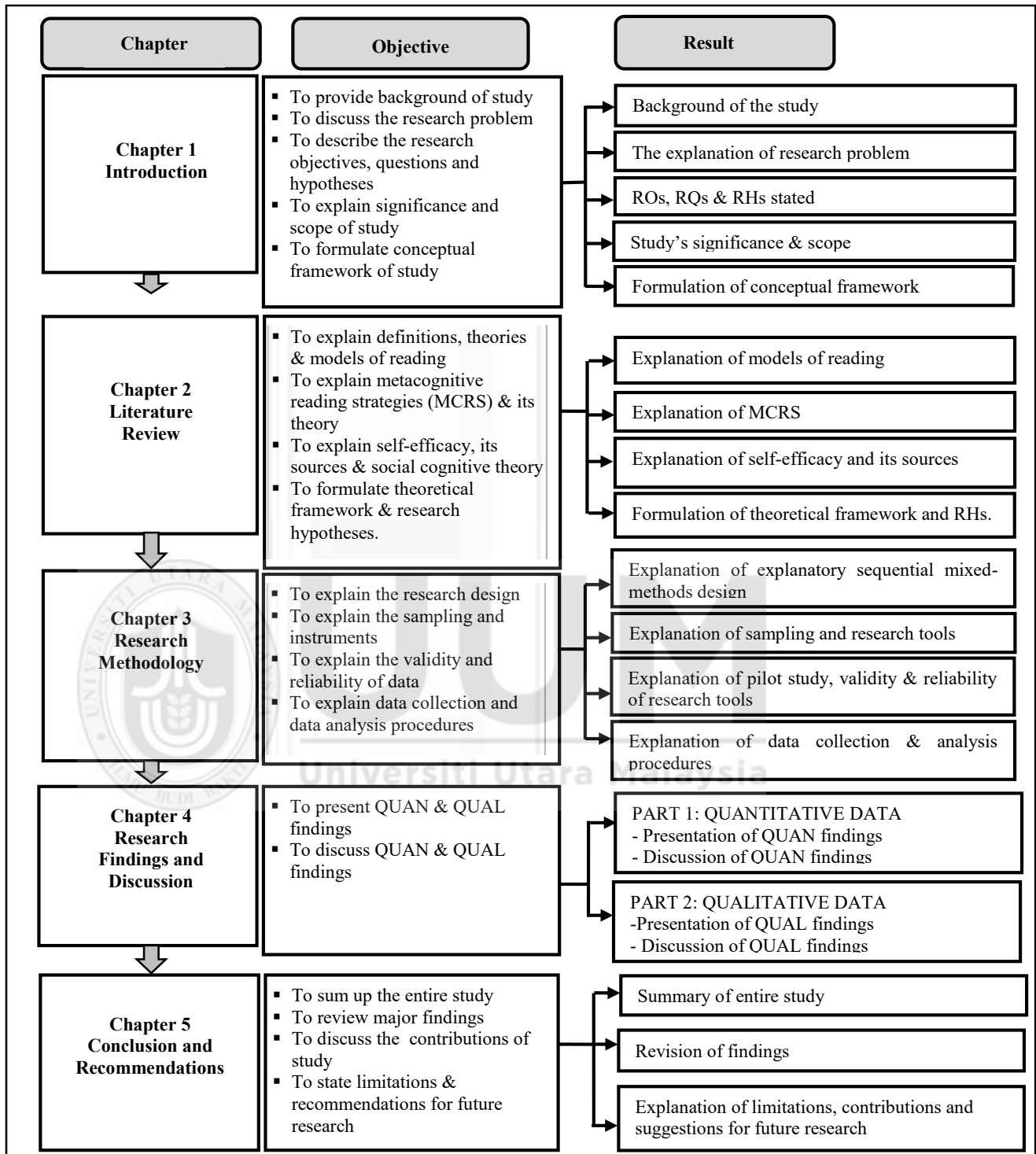


Figure 1.3. Structure of the Thesis

1.11 Summary

The current chapter included the background of the study, offered brief information about reading comprehension (i.e., dependent variable), self-efficacy sources and metacognitive reading strategies (i.e., independent variables), and reading self-efficacy beliefs (i.e., mediator). Moreover, it explained the current reading issues faced by Saudi EFL learners. It also conferred the problem statement, research objectives, research questions as well as research hypotheses. Significance and scope of the study were discussed. Also, conceptual framework of study was presented. Finally, the organisation of thesis and the operational definitions of key terms were presented. The following chapter reviews the literature, chiefly regarding reading comprehension, metacognitive reading strategies, self-efficacy beliefs and self-efficacy sources.



CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

As shown in Figure 2.1, this chapter starts with the explanation of definitions and models of reading. Moreover, language learning strategies and their importance are discussed. Also, major taxonomies of reading strategies are discussed. Furthermore, the taxonomy selected for the current study is explained in detail.

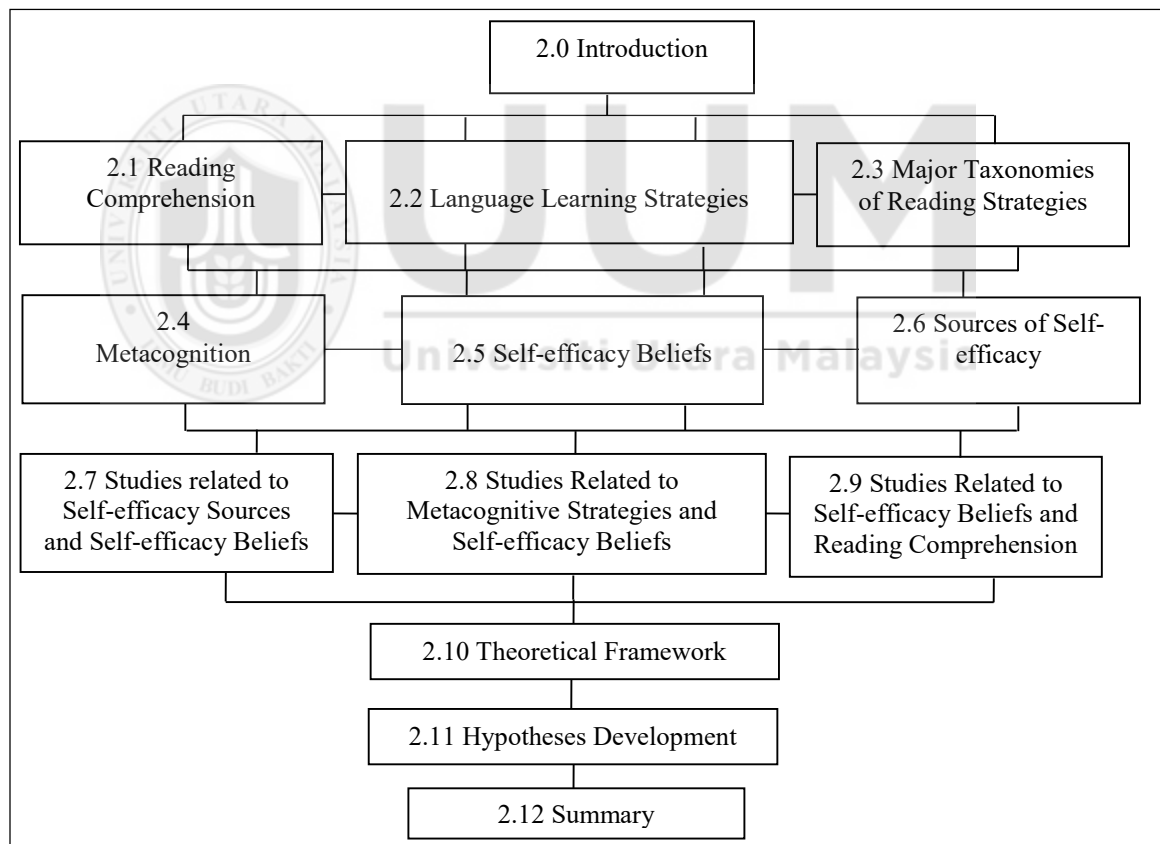


Figure 2.1. The Organisation of Chapter Two

Before explaining the metacognitive reading strategies, the concept of metacognition is explained first to build the background of metacognitive reading strategies. Similarly, reading self-efficacy beliefs and sources of self-efficacy are explained in detail. Additionally, studies regarding the relationship between self-efficacy sources and self-efficacy beliefs, metacognitive reading strategies and self-efficacy beliefs, and self-efficacy beliefs and reading comprehension are reviewed. Moreover, underpinning as well as supporting theories are explained in detail. Lastly, research hypotheses are developed on the basis of the reviewed literature.

2.1 Reading Comprehension

The following sub-sections present history, definitions, and models of reading comprehension.

2.1.1 Reading: History and Definitions

Fisher (2004) considered reading as the speaking of writing. He asserted that if writing is expression, then in turn, reading is considered as impression. This thought might suggest that when writing was first invented by a human being, he must have offered a technique or system to convert the spoken words into coded form in the shape of symbols, fonts, and visuals. Then, for the purpose of getting meaning of these ideas and words, human beings had to decrypt and comprehend these written symbols. This method of making sense of written material was later termed as 'reading'. Hence, he claimed that existence of reading came into being a long time ago, just like writing and its date of inception differs from one

civilisation to another depending upon the time those civilisations established their system of writing.

As the reading researchers were making an effort to understand reading's historical evolution and its working mechanism, two theories came into light which were contradictory to each other. The first theory was about the system of sounds and the proponents of it are of the viewpoint that reading is a 'phonological procedure' which takes place alphabet by alphabet and word by word till that specific uttered sound establishes any meaning. On the other hand, the second theory was related to graphics (grapheme) and the proponents of it considered reading as a 'visual semantic process'. Fischer (2004) believed that both the theories are acceptable as reading on the initial level needs phonological identification of written form, and when one's flow of reading becomes smooth, their reliance on sound is reduced and they rely more on visuals.

Alternatively, Lin (2011) attempted to explain the concept of reading by studying and blending the definitions proposed by several studies (Pressley & Afflerbach, 2012; Snow, 2002), offering a further complete definition. He typified reading as a collaboration of three components, firstly, the reader who comprehends the text, secondly, the written material being read and lastly, the activity in which comprehension occurs. His definition laid great emphasis on reading purpose of the reader as a vital constituent of the entire process as stressed by Grabe (2009) who, in his definition, stressed on the need to adopt the process of reading to attain specified learning targets, and to accomplish entire comprehension as affirmed by Carroll (1971). Anderson (1999) included another element in reading

definition which fits more appropriately to the context of English as a foreign/second language (EFL/ESL). He considered previous experience as well as the background knowledge of the reader which denotes noticeably to both L1 and L2 reading competence and habits. Similar to the previous definition, Wixson, Peters, Weber, and Roeber (1987) considered reading as the method of formation of meaning with the help of forceful collaboration among reader's past knowledge about the content, information presented in the text, and background of the reading situation. Furthermore, McNamara (2007) proclaimed that reading ought not to be restricted to the capability to decode text, rather, it should be conceptualised as a medium of swapping thoughts; the method involves ample and effective collaboration of the aforementioned elements by using suitable strategies to accomplish comprehension.

2.1.2 Models of Reading

The reading process can be understood by inspecting the reading models recommended by various researchers. Up till now, several efforts (e.g., Anderson & Pearson, 1988; Gouch, 1972; Grabe & Stroller, 2002; Stanovich, 1980) were made to demonstrate the authentic reading process, and models which were proposed by those researchers are known as process models (Urquhart & Weir, 1998). Ridgway (1994) believed that a model denotes an example of a theory which assists it to forecast about a particular situation. There are three well-known models regarding the process of reading, i.e., bottom-up model, top-down model and interactive model. These models are of vital importance regarding reading process due to the reason that the reader's timing and frequency of hinging on syntactic awareness differs with the usage of each of these models (Abbott, 2006; Plakans, 2009).

Those strategies which are employed in the bottom-up model are considered as local strategies. However, those employed in the top-down model are known as global strategies (Abbott, 2006; Gascoigne, 2005; Plakans, 2009; Radach, Huestegge, & Reilly, 2008; Young & Oxford, 1997). Global strategies are similar to metacognitive and cognitive reading strategies in many aspects (Hamdan, Ghafar, Sihes, & Atan, 2010; Mokhtari & Reichard, 2002; Plakans, 2009), which were selected in the current study.

2.1.2.1 Bottom-up processing

In the bottom-up reading model, the reading process works in such a way that written text drives a reader and also the reader decodes the text in a sequence, initiating with the letters. A bottom-up model considers written text as a series of individual words. It is necessary to decode every single word separately. This model lays great stress on knowledge regarding word identification as well as phonics (Hardin, 2001). Foreign language learners who have learned English with the help of grammar-translation method (GTM), e.g., Saudi EFL learners, employ the bottom-up model while reading a text (Sidek, 2012).

Gough (1972) presented a well-known example regarding the bottom-up reading model that is cited repeatedly, in which the reader detects isolated alphabets, exchanges a series of alphabets into a series of organised phonemes and ultimately comprehends them as a word (Urquhart & Weir, 1998). The reader then shifts to the following word and progresses in a similar manner till every word in a sentence is comprehended successfully. In other words, prior to comprehending the entire sentence, the reader reads every word present in

the sentence. The name 'bottom-up' was given to this method due to the reason that it follows a method which works in sequence. For instance, the reader copes with alphabets, words, phrases, and sentences to comprehend the text (Urquhart & Weir, 1998). The bottom-up reading model was also linked with the concept of behaviourism in the mid of 20th century, and with the 'phonics' teaching methodologies that claim that there is a necessity for the reader to learn to identify alphabets before approaching words, and so on (Alderson, 2000). This model was also well-matched to audio-lingual methodology. This methodology was established in the 1960s to teach English to ESL/EFL learners. The bottom-up model fits appropriately into it due to the reason that it focuses on the decryption of sound-symbol associations during the reading process (Lally, 1998). At the school-level reading classes in KSA, the learners are taught mostly by using grammar-translation method (GTM) (Al-Seghayer, 2011), which focuses mainly on the word-for-word translation of the text. Therefore, mostly in Saudi schools, the learners employ the bottom-up approach of reading.

The major issue in employing the bottom-up model is that it considers reading as a one-way process. The method believes that one can comprehend the entire text only when one decrypts small linguistics components and recognises the association between the words in a phrase or sentence. In reality, it is highly unlikely that the reader is aware of the meaning of every single word and also to determine the relationship of different words with each other (Davies, 1995). One more limitation of this reading model is that the reader takes much more time to identify a word due to the time consumed on working on single letters.

In fact, words may be identified more rapidly as compared to single alphabets (Urquhart & Weir, 1998).

2.1.2.2 Top-down processing

The top-down reading model was generally acknowledged as a reverse process of the bottom-up model. If it is accurately interpreted, the top-down reading model proposed that a reader initiates with the largest component, for instance, the entire written text. Although it seems impossible that a reader copes with the text all together and then advances towards paragraphs, sentences, phrases, words, and lastly alphabets (Urquhart & Weir, 1998). The name 'top-down' is employed to indicate a method in which to comprehend a text, reader's anticipations play a vital role, thus, the name 'top-down' can be deceptive (Urquhart & Weir, 1998). Therefore, Urquhart and Weir (1998) recommended the usage of terms 'text driven' and 'reader driven' rather than bottom-up and top-down correspondingly to portray the contrast.

The top-down model laid stress on the significance of schemata which is employed by the reader during reading. Schemata comprises webs of information (i.e., reader's past knowledge) saved in a reader's brain, signify general perceptions of a given entity, occasion or situation, and assist in comprehending new information in the text (Alderson, 2000; Rashidi & Soureshjani, 2011). In the top-down model, schema is being activated by the reader which he/she deems related to the new information in the text and comprehends the information according to his/her own schema (Alderson, 2000). The schemata of a reader greatly impacts the way he/she deduces the written text and also the way he/she

saves it in brain (Alderson, 2000). This interpretation is based on a well-known reading theory called schema theory (refer to Section 2.11.2.2 for detailed explanation of schema theory), which describes that the attainment of knowledge and understanding of the text can be achieved by triggering the schemata (Alderson, 2000).

Schema theory was of the view that solely a written text does not convey any meaning; instead, it is responsible to offer a guidance to the readers regarding the construction of expected meaning by employing their past knowledge of the subject matter and their experience regarding it (Carrell, 1983). It denotes that what one comprehends from the written text differs hinging on their experience and past knowledge. While writing a text, an author assumes that readers would interpret meaning the same way that he/she intended to convey. However, the comprehension of the readers can vary from the author's thoughts, depending upon their experience and previous knowledge. Thus, prior to writing a text, depending on the kind of written materials, e.g., manuals, web pages and reports, it is essential for writers to discover the predictable experiences and knowledge of the readers which are related to the topic (Carrell, 1983).

The top-down reading model is strongly related to the current study due to the reason that global reading strategies, which correspond to this kind of model, share many resemblances with metacognitive reading strategies. The strategies that are frequently used by the readers contain reviewing the written text prior reading it, making a decision on what to skip and what to read thoroughly, and predicting the meaning of unfamiliar words (Mokhtari & Reichard, 2002).

2.1.2.3 Interactive processing

Both reading models, i.e., bottom-up and top-down, might have failed to fully explain the accurate reading process. There were many researchers (e.g., Bensoussan & Kreindler, 1990; Grabe, 1991; Hedgcock & Ferris, 2009; Hudson, 2007; Liontas, 2002) who believed that proficient readers do not rely wholly on either one of the aforementioned models; instead, they employ a blend of both of them. This specific model is called as an interactive reading model, in which both bottom-up and top-down models operate together and cooperate in a complicated manner which is quite hard to understand, with balances which differ hinging on the type of text, aims of reading and the readers (Alderson, 2000). In the interactive model, reading comprehension is deemed as the collaboration among the bottom-up model from concepts conveyed at the sentence level and the top-down model from triggered schemata (Bensoussan & Kreindler, 1990).

Grabe and Stroller (2002) debated that there were a few researchers who claimed that a reader could employ suitable ideas related to the bottom-up model and fuse them with the vital ideas from the top-down model. However, this argument is inconsistent due to the reason that the vital constituents of the bottom-up model (i.e., effective impulsive processing in running memory) are conflicting with the intense top-down controls on comprehension. To cope with such an inconsistency, they offered a customised interactive model. According to this model, a reader can identify words spontaneously by getting information from graphemes and spellings of words and he/she can employ the top-down model only when they come across unfamiliar or confusing words. In other words, a lot of

time is consumed to trigger schematic resources and hence, schematic knowledge is not necessary for effective word identification.

Similarly, Stanovich (1980), a renowned follower of an interactive reading model, named his model as 'interactive-compensatory model'. His model was grounded on the idea of the compensation hypothesis. This idea indicated that if a person has paucity of skills in some region of knowledge, this paucity may be compensated for by skills in the other regions of knowledge (Alderson, 2000). Stanovich's (1980) model recommended that if one faces problems while understanding a text due to paucity of linguistic knowledge or expertise, it is possible that one can compensate for deficiencies with potency in some other regions of knowledge, i.e., metacognitive skills.

2.2 Language Learning Strategies

In 1970s, special attention was given to the language learning strategies (LLSs). Since then, these have become researchers' focus of attention (Griffiths & Oxford, 2014). Numerous researchers defined them differently. According to Oxford (2003), learners use these strategies as devices to give shape to their knowledge, retain their understanding, employ the acquired information, prepare for a specific language task, assess learning, evaluate the text meaning, and enrich the experience of learning. There are many researchers whose research regarding the usage of strategies by good learners of the language (O'Malley & Chamot, 1990; Oxford, 1990; Rubin, 1975; Stern, 1975; Wenden & Rubin, 1987) has made way for the notion of metacognition. Varshney and Banerji (2012) defined the metacognitive strategies as an amalgamation of learners' thinking and specific actions to

enrich their ability in the learning of foreign language and to enhance their level of language and communication.

Primarily, when research on the LLSs started, the researchers distinguished low proficient learners from high proficient learners on the basis of the strategies used by learners (Rubin, 1975; Stern, 1975). However, it was revealed later that almost every learner of language makes use of metacognition and language learning strategies as these are inherent and natural. It is correct that there is a close correlation between a learners' proficiency level and usage of LLSs frequency though (Green & Oxford, 1995). Oxford (1990) stressed that metacognitive awareness of strategies plays a great part in the employment of LLSs. There are some studies conducted to determine the language strategies awareness and the findings have verified that metacognition is extremely valuable in learning a language (Chi-Him, 2013).

Fahim and Noormohammadi (2014) compared high achievers with low achievers in order to know their language learning strategies. The outcomes of the study showed that there existed a significant correlation between the strategies' usage and the learner's achievement. Low achievers employed less language learning strategies as compared to the strategies used by high achievers. Furthermore, it was discovered that high achievers used more complex strategies as compared to low achievers. The usage of LLSs also showed a relationship with cognitive and metacognitive capabilities. Metacognitive strategies were employed by high achievers, while low achievers were found to be reluctant in the usage of metacognitive strategies. Oxford (2003) affirmed that all the LLSs are useful

and one cannot say about any specific learning strategy whether it is good or bad. However, depending on a particular condition and individual learner, any specific learning strategy can be more or less beneficial. The learner regulates these conditions, and it depends upon the learner's decision that which strategy out of hundreds of strategies he/she uses is appropriate for a particular situation.

The decision of the selection of strategy by the language learner is goal oriented. As the strategy usage is goal reliant, so the learner inspects that the strategy that he/she would use is (a) related to the task at hand, (b) related to the other language learning strategies being employed to the task at hand, and (c) related to the learner's general learning temperament. By and large, metacognitive, cognitive and social features of the LLSs that are used by the learners have been discussed above. The concept of metacognition has additionally aided our understanding to get the full picture of the usage of language learning strategies (Oxford, 2003). The current study focuses on reading strategies; therefore, the next section talks specifically about the major taxonomies or classifications of reading strategies.

2.3 Major Taxonomies of Reading Strategies

When research in the field of second language started, reading was considered as an inactive process. It was regarded as a decoding process in which the reader decodes or unveils the meaning that an author is conveying through a printed text. Hence, problems faced by readers in comprehending the text were considered as decoding problems (Carrell, Devine, & Eskey, 1988). There were certain flaws in the decoding model because there was no contribution of a reader in the process of reading and thus it was insufficient. Since

then, researchers started to look at reading differently once they knew that something was missing in the decoding model. Since 1979, the researchers have started to look at the reading process as an active process instead of a passive one. Due to this shift of reading process, the readers of a second language not only started to decode the text but also started applying cognitive features, i.e., using background knowledge, inferences and reading strategies to comprehend the text (Carrel et al., 1988; Urquhart & Weir, 1998).

Koda (2005) found that the strategy classifications are recognised with regard to two aspects. Some classifications are based on local and global strategies. On the other hand, some are based on cognitive and metacognitive strategies. For the identification of the reading strategies used by the readers, the division of categories is beneficial. Based on the previous literature, some suggestions have been given by the researchers for the classification of reading strategies, as shown in Table 2.1.

According to Chamot and O'Malley (1996) (as cited in Koda, 2005), the reading strategies are of three types. The first type of reading strategies is cognitive strategies. These are employed by the reader to complete cognitive tasks, i.e., word-part analysis and inference. The second type is metacognitive strategies. To regulate the cognitive processes, metacognitive strategies are employed, such as comprehension monitoring, repairs and to know when to employ a specific strategy, etc. The third type of strategy employed by the readers refers to social / affective strategies. This type of strategies is used during reading when a reader has to interact with others in order to seek help.

In the same way, Anderson (1991) categorised the reading strategies into five types. The first type is supervising strategies in which a reader regulates the comprehension progress. The second type is support strategies, which is used to monitor processing behaviours. The third type is paraphrase strategies which comprises local processing of information, i.e., using word-analysis. The fourth type of strategies is used to create coherence in reading materials, i.e., global text information processing. The fifth type is test-taking strategies, which is employed for the completion of any task during a test of reading.

Table 2.1

Major Taxonomies of Reading Strategies

Authors	Types of Strategies
Chamot and O'Malley (1996)	1. Cognitive strategies 2. Metacognitive strategies 3. Social/ Affective strategies
Anderson (1991)	1. Supervising strategies 2. Support strategies 3. paraphrase strategies 4. global text information processing strategies 5. test-taking strategies
Paris, Wasik and Turner (1991)	1. Pre-reading strategies 2. During reading strategies 3. Post-reading strategies
Mokhtari and Sheorey (2002)	1. Global strategies 2. Problem-solving strategies 3. Support strategies
Mokhtari and Reichard (2002)	1. Global strategies 2. Problem-solving strategies 3. Support strategies
Mulcahy-Ernt and Caverly (2008)	1. Rehearsal 2. Elaboration 3. Organisational 4. Monitoring 5. Affective and motivational strategies
Simpson and Nist (2000)	1. Question Generating and Answer Explanation 2. Text Summarisation 3. Student-generated Elaboration 4. Organising Strategies

On the other hand, Paris et al. (1991) (as cited in Koda, 2005) classified reading strategies by the time, e.g., at which time the strategies are used, such as before, during and after reading. The first type, i.e., before-reading strategies is employed by the reader to trigger the background knowledge relevant to the text. The second type, i.e., during-reading strategies is employed to make reference and detect the main idea present in the text. The third type, i.e., after-reading strategies is employed to evaluate the content of the reading text.

Mokhtari and Reichard (2002) presented a metacognitive reading strategies taxonomy and divided it into three categories, i.e., global, problem-solving, and support strategies. They also developed an instrument called ‘Metacognitive Awareness of Reading Strategies Inventory’ (MARSII). However, it is worth mentioning that this taxonomy was designed only for native English users. Also, Mokhtari and Sheorey (2002) classified reading strategies into three categories, namely global, problem-solving and support strategies. An instrument called ‘Survey of Reading Strategies’ (SORS) was developed by them to gauge the reading strategies’ usage by EFL readers.

Mulcahy-Ernt and Caverly (2008) divided reading strategies into five types. ‘Rehearsal strategies’ comprises reading the text again and marking the text. ‘Elaboration strategies’ includes linking new and old knowledge about the text. Two organisational strategies have also been included, i.e., ‘outlining’ and ‘mapping’. Lastly, ‘affective or motivational strategies’ includes motivation, anxiety and time management.

Similarly, Simpson and Nist (2000) designed a taxonomy of reading strategies. Their taxonomy included four reading strategies, i.e., summarisation of the text, generating the questions, elaborations (making inferences and association between ideas) and strategies related to organisation (graphic organisers).

The current section has reviewed the major taxonomies of reading strategies. The next section sheds light on a specific taxonomy of reading strategies selected for the present study.

2.3.1 Taxonomy Selected for the Present Study

After reviewing the major taxonomies of reading strategies, the researcher found two metacognitive reading strategies taxonomies that have been widely used in the previous literature and also fit into the scope of the current research. Firstly, metacognitive reading strategies taxonomy presented by Mokhtari and Reichard (2002). Secondly, metacognitive reading strategies taxonomy introduced by Mokhtari and Sheorey (2002). Out of the aforementioned two taxonomies, the researcher selected the taxonomy presented Mokhtari and Sheorey (2002) due to the reason that this taxonomy was specifically designed for EFL learners. Whereas, the other taxonomy was designed for English native speakers. In the selected taxonomy, metacognitive reading strategies have been divided into three categories, i.e., ‘global’, ‘problem-solving’, and ‘support’ reading strategies, as summarised in Table 2.2. The definitions of the three kinds of metacognitive reading strategies as stated by Mokhtari and Sheorey (2002) are as follows:

2.3.1.1 Global Reading Strategies

Global reading strategies are those deliberate, cautiously planned techniques by which readers scrutinise their reading, i.e., previewing the text, employing typographical aids to assist reading process, establish purpose of reading, etc.

2.3.1.2 Problem-solving Reading Strategies

Problem-solving Reading Strategies are the techniques and procedures that readers employ when dealing directly with the text. These are specified, focused techniques being employed when difficulties arise in understanding information present in the text, i.e., adjusting reading pace according to the situation, reading the text again for better comprehension, guessing unknown words' meaning, etc.

2.3.1.3 Support Reading Strategies

Support reading strategies are basic support strategies which are meant to assist the reader in reading comprehension, i.e., underlining the information, taking notes, using a dictionary, etc.

It is worth mentioning that 'Survey of Reading Strategies' (SORS) (refer to appendix D) was used as an instrument to measure the metacognitive reading strategies employed by Saudi EFL learners. The next sections build a foundation for metacognitive reading strategies by reviewing the definition of metacognition and several constituents of it.

Table 2.2

Metacognitive Reading Strategies

Global strategies	Problem-solving strategies	Support strategies
<ul style="list-style-type: none"> • Establish purpose for reading 	<ul style="list-style-type: none"> • Read slowly 	<ul style="list-style-type: none"> • Take notes while reading
<ul style="list-style-type: none"> • Activate prior knowledge 	<ul style="list-style-type: none"> • Adjust reading rate 	<ul style="list-style-type: none"> • Read out loud
<ul style="list-style-type: none"> • Preview the text 	<ul style="list-style-type: none"> • Pay attention 	<ul style="list-style-type: none"> • Paraphrase
<ul style="list-style-type: none"> • Determine if content fits purpose 	<ul style="list-style-type: none"> • Reflect on reading 	<ul style="list-style-type: none"> • Revisit previously read information
<ul style="list-style-type: none"> • Skim the text 	<ul style="list-style-type: none"> • Reread 	<ul style="list-style-type: none"> • Ask self-questions
<ul style="list-style-type: none"> • Decide what to read closely 	<ul style="list-style-type: none"> • Visualise 	<ul style="list-style-type: none"> • Use reference materials
<ul style="list-style-type: none"> • Use text features (tables, pictures, etc.) 	<ul style="list-style-type: none"> • Get back on track when losing concentration 	<ul style="list-style-type: none"> • Underline text
<ul style="list-style-type: none"> • Use context clues 	<ul style="list-style-type: none"> • Guess meaning of unknown words 	<ul style="list-style-type: none"> • Summarise
<ul style="list-style-type: none"> • Use typographical aids (boldface and italics font) 		<ul style="list-style-type: none"> • Translate from L2 to L1 while reading
<ul style="list-style-type: none"> • Analyse and evaluate information 		<ul style="list-style-type: none"> • Think about information in both L2 and L1 while reading
<ul style="list-style-type: none"> • Check understanding when reading conflicting information 		
<ul style="list-style-type: none"> • Make predictions 		
<ul style="list-style-type: none"> • Check accuracy of predictions 		

Note. Adapted from “Measuring ESL students' awareness of reading strategies” by K. Mokhtari & R. Sheorey. 2002, *Journal of Developmental Education*, 25(3), 2-11. Copyright 2002 by Journal of Developmental Education.

2.4 Metacognition

This section presents definitions of metacognition and the processes involved in metacognition.

2.4.1 Definition of metacognition

In general, the term ‘metacognition’ indicates reflecting upon one’s own thinking and regulating one’s own learning. Out of many approaches, it is one of the approaches that have been offered and being researched for the effective comprehension of reading. Metacognition comprises two elements, i.e., metacognitive knowledge and metacognitive regulation (Flavell, 1979). Metacognitive knowledge means attained knowledge about cognitive procedures. In other words, knowledge used to regulate the processes of cognition is called metacognitive knowledge.

The above mentioned components are essential for successful reading comprehension. The first constituent (i.e., metacognitive knowledge) deals with the knowledge of the learners about their cognition and the harmony between the individual as a pupil and the situation of learning (Baker & Brown, 1984). For instance, if examined appropriately, a learner or child would be aware of their own specific relevant characteristics of thinking. However, the skill of being aware of one’s own thinking process during the process of reading does not come early as it takes time to develop such an ability. The learner would successfully fulfil the requirements of learning situation if he is aware of his own thinking process. It is very difficult for the learner to deal with the challenging situations or take any

precautionary measures if he is not aware of himself as a learner or the learning situation that he is dealing with (Baker and Brown, 1984).

The second constituent (i.e., metacognitive regulation) deals with the mechanisms of the self-regulation employed by a student during a continuing effort to resolve the academic problems. These metacognitive mechanisms comprise scrutinising one's effort to resolve a problem, plotting the following move, examining the efficiency of one's own attempted move, and reviewing and assessing one's own strategies employed for learning. Depending on the objectives of the reading activity, the strategies employed by the learners may differ accordingly; for instance, different strategies are required when the learner wants to do reading for the sole purpose of getting meaning than for memorising something. The first component presented by Baker and Brown (1984), i.e., metacognitive knowledge comprises knowledge about learner's own-self, requirements of the task, relationships between past knowledge, written material, comprehension of text and strategies employed by the reader. The second component, i.e., metacognitive self-regulation comprises synchronising knowledge of metacognition, i.e., knowledge about oneself and knowledge of text arrangement, scrutinising one's understanding, planning, detecting and correcting the factors for which comprehension failure has occurred (Baker & Brown, 1984).

Metacognitive regulation and knowledge of metacognition are differentiable from each other; however, it has been proposed by Brown (1987) that 'oversimplification' of a complicated procedure may occur due to these efforts of differentiating both of them. Earlier research laid stress on knowledge of metacognition regarding strategies. Whereas,

in the recent times, most of research is conducted on learner's experiences regarding metacognition that includes feelings (feeling of being aware of knowledge, awareness, difficulty, self-confidence) and knowledge of metacognition concerning thinking processing (Brown, 1987). According to Flavell (1979), a learner is mindful of the metacognitive experiences that are sentimental and cognitive (cited in Brown, 1987). Metacognitive experiences play a crucial part in scrutinising and regulating of the learning development process as well as the intrinsic perspective in which the process of learning occurs. This aspect of metacognition might be able to affect the usage of the strategies by the learners, sentiments and learning motivation.

The concept of metacognition has been explained above. As far as the metacognitive reading strategies are concerned, numerous researchers defined them differently. Metacognitive reading strategies have been defined by New South Wales Department of Education and Training (2010) as deliberate, purposeful, prearranged, objective-oriented and future-directed cognitive activities that assist a reader to ponder about and regulate his progress in achieving a specific reading task. Pintrich, Wolters, and Baxter (2000) defined metacognitive reading strategies as those strategies which involve planning, activating, monitoring, controlling, reacting and reflecting. Iwai (2011) is of the view that metacognitive strategies involve three processes, i.e., planning, regulation and evaluation. The next section discusses self-efficacy and reading self-efficacy beliefs (i.e., mediating variable) briefly.

2.5 Self-efficacy Beliefs

Bandura (1986) defined self-efficacy beliefs as “people’s judgement of their capabilities to organise and execute courses of action required to attain designated types of performance” (p. 391). Similarly, Jinks and Morgan (1999) affirmed that it is a perception of confidence of an individual related to accomplishment of particular tasks. Aforementioned definitions lay emphasis on the role of individuals’ self-efficacy in determining success in any task. Its influence depends upon the decisions made by them, the amount of effort put in any task, their perseverance, and emotions felt by them, so as to attain goals they believe they are able of achieving (Pajares, 2003). The current study focused on reading self-efficacy. The definition of reading self-efficacy is explained in the next section.

2.5.1 Definition of Reading Self-efficacy Beliefs

Reading self-efficacy beliefs denote learner’s appraisals about their reading capabilities, i.e., how confident they are about achieving a specific reading task. Reading self-efficacy beliefs are influenced by the level of performance being achieved in the similar tasks by the readers; this contains any accompanying, response and reassurance received from the teacher (Wigfield et al., 2004). Guthrie et al. (2007) defined reading self-efficacy beliefs as individual’s opinions about his/her personal abilities to read numerous kinds of perplexing writings and books and being self-confident in his/her individual skills of reading. They have described eight features of reading self-efficacy beliefs, which are as follows:

1. A good reader has faith in himself/herself.
2. One remains confident during the reading.

3. One has knowledge of reading strategies and one knows how to use them.
4. One has capability to recognise most of the words present in the text.
5. One has capability to figure out and attain the meaning of unacquainted words.
6. One often prefers to read challenging books.
7. One gets positive feedback of being a good reader from teachers and parents.
8. One considers oneself to read well and better than other peers.

Therefore, reading self-efficacy beliefs can be described as an individual's beliefs to obtain success in a specific reading activity and to become skilled at grasping complicated ideas in writings.

2.5.2 Rationale of Considering Reading Self-efficacy Beliefs as a Mediator

As already explained in Chapter one, there is no direct relationship between self-efficacy sources (i.e., mastery experience, vicarious experience, verbal persuasion, and physiological state) and reading comprehension in the past literature. However, after reviewing the literature, it was established that there was a strong association between self-efficacy sources and reading self-efficacy beliefs (Arslan, 2012; Chen & Usher, 2013; Kaya & Bozdog, 2016; Lin, 2016; Lin & Tsai, 2018; Phan & Ngu, 2016) and also between reading self-efficacy and reading comprehension (Al Ghraibeh, 2014; Galla et al., 2014; Ghabdian & Ghafournia 2016; Habibian & Roslan 2014; Hedges & Gable, 2016; Lee & Jonson-Reid, 2016; Oh, 2016; Osman et al., 2016; Piercey, 2013; Rachmajanti & Musthofiyah, 2017; Salehi & Khalaji, 2014; Tabrizi & Jafari, 2015). According to Preacher et al. (2007), mediation (M) can occur between independent variable (X) and dependent

variable (Y), even if there is no direct relationship between X and Y. In other words, if M is influenced by X and Y is influenced by M, then in turn, Y is influenced by X. Thus, reading self-efficacy beliefs was employed as a mediator between self-efficacy sources and reading comprehension.

Numerous studies used self-efficacy as a mediator (Bates & Khasawneh, 2007; Coutinho & Neuman, 2008; Diseth, 2011; Fast et al., 2010; Galla et al., 2014; Keskin, 2014; Phan & Ngu, 2016; Poortvliet & Darnon, 2014; Templin, 2011; Wilson & Kim, 2016). Particularly, reading self-efficacy was also used as a mediating variable between reading instruction and reading amount (Lau, 2009b). However, according to researcher's best knowledge, there is a dearth of studies in which reading self-efficacy was used as a mediator between self-efficacy sources/metacognitive reading strategies and reading comprehension. Thus, reading self-efficacy was used as a mediator in the current research. The subsequent paragraphs discuss the sources of self-efficacy in detail.

2.6 Sources of Self-efficacy

The thinking and conduct of the learners depend chiefly on the self-belief about their abilities. The development of self-efficacy depends upon the thoughts of the learners about their performance. Therefore, there are four sources from which self-efficacy is developed, i.e., mastery experience, vicarious experience, verbal persuasion, and physiological state. The information generated by the four sources of self-efficacy undergoes cognitive processes, i.e., choosing and evaluating, which is then assimilated to the judgments of self-

efficacy (Bandura, 1977; Fall & McLeod, 2001; Hoy & Spero, 2005; Schunk, 2003; Zimmerman, 2000).

It should be considered that the four sources of self-efficacy do not hold hierarchical order. It is possible that the learner's self-efficacy might be influenced by all the four sources simultaneously. Moreover, the self-efficacy level might be increased or decreased by the impact of any one of the four sources of self-efficacy, which will consequently influence the academic performance of the learner (Fall & McLeod, 2001).

2.6.1 Mastery Experience

Mastery experience is the first source of self-efficacy. It denotes the past experiences of an individual. The past experiences can be positive as well as negative. Generally, individual's successes and accomplishments are known as positive mastery experiences, On the other hand, individual's failures and setbacks are referred to negative mastery experiences (Bandura, 1997). These experiences also denote the skills being employed by the learners while facing an academic problem and the level of persistence while facing hardships to achieve triumph. Thus, self-efficacy assesses learner's determination to get success and encourages learner's resilience to pass the obstacles in the coming future (Bandura, 1997).

Mastery experience is generally considered as the most suitable predictor of the learner's self-efficacy (Bryant, 2017; Cantrell et al., 2013; Klassen, 2004; Lin & Tsai, 2018; Phan, 2012; Usher & Pajares, 2006; Usher & Pajares, 2008; Zarei & Naghdi, 2017). In other words, the learners who have experienced positive mastery experiences are more self-

efficacious as compared to those who have experienced negative mastery experiences (Cantrell et al., 2013).

It is considered as the most effective source of self-efficacy beliefs due to the reason that it conveys exact indication about the confidence of the learner in getting success. The extent of variation in the perceived self-efficacy of the learners through mastery experience is dependent on certain factors, i.e., their ideas about their abilities, task difficulty, quantity of effort being paid, the quantity of external assistance being received, the situations in which performance occurs, the sequential pattern of their setbacks and successes, and the cognitive organisation of these mastery experiences. Thus, one cannot only rely on the performance to know about the personal abilities of the learners. Under inconsistent situations, perceived self-efficacy is generally considered as a reliable predictor as compared to the performance of learners in the past, because the judgment of self-efficacy covers additional information than just relying on the performed action (Bandura, 1997). Hence, perceptions of the earlier accomplishments deliver better knowledge about the self-efficacy of a learner as compared to its performance.

However, Brady-Amoon and Fuertes (2011) suggested that interventions are required by teachers and fellows of a learner. The learners consider past experiences as a valid predictor of the events to occur in future. Thus, to handle their unpleasant academic past experiences, self-efficacy needs to be elevated by their teachers by making them remember the successful past experiences regarding their skills.

Though the most significant self-efficacy source is mastery experience, the evaluation of self-efficacy can be determined from some other factors as well like vicarious experience. Learners have a tendency of comparing themselves with other learners under similar circumstances and they evaluate their abilities on the basis of other learners' accomplishments or failures (Bandura, 1997). Therefore, in the next section, vicarious experience is explained in detail.

2.6.2 Vicarious Experience

The second source of self-efficacy is vicarious experience (Bandura, 1997). Vicarious experience can be attained during the demonstration of an academic task. During the learning process, certain tasks are being performed in the classroom. When any learner demonstrates something or acts as a model and becomes successful in the accomplishment of specific task in front of other fellow learners, self-efficacy beliefs of the other learners who are observing a model increases. On the other hand, if a model fails in the fulfilment of a specific task, as a consequence, the self-efficacy beliefs of the fellow learners who are observing a model would decrease (Bandura, 1997). Some researchers discovered that self-efficacy beliefs get influenced by vicarious experience (Arslan, 2013; Bryant, 2017; Hampton, 1998; Lin, 2016; Lin & Tsai, 2018; Matsui, Matsui, & Ohnishi, 1990; Phan, 2012). However, other researchers found that there is no effect of vicarious experience on self-efficacy beliefs (Anderson & Betz, 2001; Lent, Lopez, & Bieschke, 1991; Lopez & Lent, 1992; Yurt, 2014; Zarei & Naghdi, 2017).

Regarding models in a learning environment, greater self-efficacy can be achieved by the learners in completing a specific academic task by observing peers as their models instead of teachers (Schunk & Hanson, 1985; Schunk, 1987). This is because the level of skills of the teachers is higher as compared to that of the learners. In addition to the skills, related characteristics, i.e., age, sex and ethnic background of the peer models can be influential factors. Therefore, the models (e.g., peers or classmates) who are more related to the learners can have a higher influence on the self-efficacy beliefs of the learners. For example, there are some learners who are unable to write a comprehensible paragraph. It is possible that this inability of writing is due to their low self-efficacy in writing skills. However, when they watch their class fellows who can write the paragraph successfully, their self-efficacy would boost possibly because their age, level of class, teacher and syllabus are the same. In contrast, if the abilities of these learners are compared with the learners of an upper class, this will yield no substantial increase in their self-efficacy. Furthermore, it was recommended by Schunk and Hanson (1985) that, during the academic life, the learners should have some models.

The vicarious experience is extremely significant for the growth of self-efficacy beliefs. Therefore, the selection of the peers as the social group of a learner plays a substantial role in the development of high or low self-efficacy beliefs of a learner (Fenning & May, 2013). This means that if the peers in the social circle of a learner have high self-efficacy beliefs, these beliefs would automatically pass to the learner and vice versa. Fenning and May (2013) declared that learners' acceptance in the academic social environment can influence the academic performance of the learners. Therefore, it is suggested by Brady-Amoon and

Fuertes (2011) and Fenning and May (2013) that a teacher should try to understand the social interaction habits of the learners which would be helpful for the learners in terms of creating social groups to make the developmental process of vicarious experience smooth and easy. This step would ultimately diminish the temporary and long-standing problems of a learner.

Moreover, the teachers can make use of vicarious experiences of other successful learners to increase the self-efficacy of the overall learners. Bartsch, Case, and Meerman (2012) have conducted a study on university learners of the statistics department. The sample was segregated into control and experimental group. Data was collected from the pre- and post-intervention survey adopted from Lane and Lane (2001) for measuring self-efficacy among the learners. The participants of the experimental group were exposed to intervention in which a student who had already graduated, gave a presentation in front of the group. The presentation was about the management of time, stress management, study habits and success stories in statistics subject. The outcomes of the study disclosed that after the vicarious presentation, the experimental group overtook the control group regarding academic self-efficacy. The findings recommended that the low self-efficacy level can be increased by listening to success stories of successful learners (Bartsch et al., 2012).

2.6.3 Verbal Persuasion

Verbal persuasion is regarded as the third source of self-efficacy and it includes feedback from the significant people in the life of a learner, i.e., parents, peers and teachers (Bandura, 1997). The nature of comments that are given by people to the learners can be perceived

as positive as well as negative. If the criticism is taken as negative by the learners, it would let them down and ultimately their self-efficacy would get lower. Alternatively, if the learners consider the comments as positive feedback due to the teacher's optimistic diction, it would cheer them up and eventually increase the self-efficacy which would enhance their academic performance (Fenning & May, 2013; Vallerand & Reid, 1984). Generally, the feedback needs to be positive and genuine.

Learners who are convinced orally that they have the abilities to have a grasp on the given activities are expected to put excessive effort and maintain it, whereas the learners who do not get convinced orally easily have self-doubts about their abilities and consequently unable to handle academic difficulties (Litt, 1988; Schunk, 1989). The persuasive feedback enhances the self-efficacy beliefs of the learners which causes the learners to work harder to become successful learners. The developed self-efficacy beliefs in turn stimulate the skill developmental process of the learners. It is quite challenging to impart high self-efficacy beliefs by means of social persuasion and care should be taken while doing it. Unrealistic feedback is rejected by the learners and causes deficiency in the self-efficacy. However, if the learners are told directly that their abilities are not enough for the accomplishing the task, as a consequence, they would start shunning the difficult academic tasks and would surrender easily under difficult times (Bandura, 1995).

Authentic and convincing feedback can be beneficial to the learners, whereas unauthentic feedback can be detrimental for them. Penny Ur (1996), a well-known EFL teacher, cautions that the appreciation passed by the teacher can be devaluated by the learner if it is

used excessively. Sometimes, the learners assume that this feedback is a part of the course and consequently they do not get stimulated by it. As a matter of fact, clichéd and unauthentic feedback can instigate annoyance among learners (Penny Ur, 1996). Similarly, mediocrity should not be appraised or else the learners would get used to the average performances and would not push themselves harder towards excellence. Recent researchers, i.e., Klassen (2004) and Usher and Pajares (2006) also revealed that the self-efficacy beliefs of the middle school learners can be upraised with the help of verbal persuasions.

The fundamental role of self-efficacy in the field of education is assisting the learners to have faith in their abilities and themselves to become successful learners. Therefore, every teacher is responsible to persuade and encourage learners to have confidence in their own accomplishments (Brady-Amoon & Fuertes, 2011). However, the nature of persuasion can be different for every learner as every learner has distinct traits of personality. Thus, it was recommended that a teacher needs to understand the earlier experiences of the learners and assist them accordingly via authentic verbal persuasion to overcome the negative thoughts that are obstructing their personal success and to enrich their capabilities to have belief in their own aptitudes (Bandura, 1997).

In the area of writing and reading, the learners who are low self-efficacious usually are dependent on the feedback of the teacher to know about their capabilities. It is likely that the verbal persuasion provided by their teacher influences their writing and reading self-efficacy beliefs (Schunk, 2003).

Therefore, if the teachers provide the positive verbal feedback that is authentically based on the learners' weaknesses to raise their self-efficacy level and the feedback is focused on swapping their pessimistic thoughts into optimistic thoughts, verbal persuasion could be extremely valuable. On the other hand, when the learners come to know that the appraisal by the teacher is unauthentic and fabricated, it would affect the learners negatively and would become the cause of low self-efficacy (Gardner & Miller, 2011).

2.6.4 Emotional State or Physiological State

Emotional/physiological state is considered as the fourth source/predictor of self-efficacy beliefs. For instance, anxiety and exhaustion among learners can generally give way to poor performance. People generally consider physiological state as a predictor of their competency level (Bandura, 1997; Usher & Pajares, 2008). Indications of anxiety, i.e., sweaty palms and heart beating with an unusual pace, may propose that the learner lacks the ability and aptitude required to complete a particular task, thus lowering the self-efficacy level of a learner (Corkett, Hatt, & Benevides, 2011).

Bandura (1997) declared that the relationship between anxiety and poor performance is cyclical. Fatigue and anxiety are a cause of poor performance, and subsequently, poor academic performance further gives way to greater anxiety and fatigue. The question that arises here is: How tough the learners are in dealing successfully with the academic difficulties? If the level of learners' toughness is high, they would be able to successfully deal with the anxiety and fatigue caused by poor academic performance. The level of learners' toughness depends upon learners' inner strengths. The inner strengths of the

learners are associated to their thoughts about own self-efficacy beliefs and their vigour to endure the continuing problems (Lombardi & Sinatra, 2012).

Various researchers conducted studies to find the association between self-efficacy and the anxiety of the learners. Some researchers' findings revealed that anxiety negatively affects the self-efficacy of the learners (Anderson & Betz, 2001; Kaya & Bozdog, 2016; Lin & Tsai, 2018), whereas some other researchers have found the opposite (Hampton, 1998; Lent et al., 1991).

Researchers divided anxiety into three types, i.e., trait anxiety, state anxiety, and the anxiety specific to the situation. Trait anxiety exists in the personality of the student, state anxiety happens at a specific moment, and anxiety related to situation happens in certain conditions. When the learners have anxiety regarding failure, they sometimes employ self-handicapping strategies to reduce their anxiety levels. According to Midgley and Urdan (1995), self-handicapping strategies are used by learners which assist them to put the blame of their failure on the circumstances rather than their abilities. Pajares (2008) explained this phenomena in more detail. He asserted that the learners do not work hard on a specific task or activity in which they lack confidence in becoming successful. When any learner does not work hard enough to get success, the learner does not get hurt much emotionally. One describes the failure by declaring that one did not perform due to the reason that one did not put enough effort. One could get success if one wanted to. Additionally, there are other self-handicapping strategies as well, i.e., self-denigrating talk, deliberate postponement, setting unachievable aims, setting low-level goals that can be achieved

easily. Pajares (2008) also recommended that the teachers should let the learners know about these self-handicapping strategies and advise them to avoid these as much as they can.

2.7 Studies Related to Self-efficacy Sources and Self-efficacy Beliefs

Various researchers conducted research regarding sources of self-efficacy in diverse academic disciplines (Arslan, 2012; Britner & Pajares, 2006; Bryant, 2017; Chen & Usher, 2013; Hampton & Mason, 2003; Joët, Usher & Bressoux, 2011; Kaya & Bozdog, 2016; Kudo & Mori, 2015; Lin, 2016; Lin & Tsai, 2018; Pajares, Johnson & Usher, 2007; Phan, 2012; Phan & Ngu, 2016; Tschannen-Moran & McMaster, 2009; Usher & Pajares, 2009).

The literature matrix table of the above-mentioned studies is shown in Appendix M.

Several researchers conducted research to determine the association of science self-efficacy sources with science self-efficacy beliefs (Britner & Pajares, 2006; Chen & Usher, 2013; Lin & Tsai, 2018). Britner and Pajares (2006) piloted a study on 319 middle school students in USA to examine an association between science self-efficacy sources and science self-efficacy beliefs. They discovered that all the three science self-efficacy sources, i.e., mastery experience ($r=0.55$, $p<0.001$), vicarious experience ($r=0.34$, $p<0.001$), verbal persuasion ($r=0.42$, $p<0.001$) were significantly and positively associated with science self-efficacy, whereas physiological state ($r= -0.40$, $p<0.001$) was significantly but negatively associated with science self-efficacy beliefs.

Also, Chen and Usher (2013) conducted a study on 1225 Middle and High school students in USA to determine the association between science self-efficacy sources and science self-efficacy beliefs. He categorised study's sample into four categories, i.e., multi-source profile, mastery profile, moderate profile, and at risk profile. Multi-source profile consisted of learners who reported all the four self-efficacy sources by and large. Mastery profile comprised those learners who reported mastery experience as the most reported source. Learners in the moderate profile are those who reported all the sources moderately. Lastly, at risk profile comprises learners who lack the presence of four self-efficacy sources in them. The hierarchical order of science self-efficacy level of the above mentioned profiles are as follows: multi-source profile, mastery profile, moderate profile, and at risk profile.

Likewise, Lin and Tsai (2018) investigated the relationship between five dimension of science learning self-efficacy beliefs (conceptual understanding, higher-order cognitive skills, practical work, everyday application, science communication) and science self-efficacy sources among Taiwanese high-school learners. The sample consisted of 390 high-school learners. The study was quantitative in nature and two questionnaires were used, i.e., 'The Sources of Science Learning Self-Efficacy Instrument' and 'Science Learning Self-Efficacy Instrument'. The findings indicated a significant positive relationship between three sources (mastery experience, vicarious experience, verbal persuasion) and all the five dimensions of science self-efficacy beliefs. The association of physiological state with science self-efficacy was significant but negative.

Other than science self-efficacy, few researchers focused on determining the association of mathematics self-efficacy sources with mathematics self-efficacy beliefs (Joët et al., 2011;

Kaya & Bozdog, 2016; Phan, 2012; Usher & Pajares, 2009). Phan (2012) examined the influence of self-efficacy sources on the learners' self-efficacy beliefs in English and mathematics domain by using latent growth modelling. The sample of the study was 339 3rd and 4th grade school learners in Australia. Two questionnaires were used to collect the data. Firstly, regarding the association between self-efficacy sources and English self-efficacy, it was found that mastery experience ($r=0.21$, $p<0.01$) and verbal persuasion ($r=0.18$, $p<0.01$) were positively and significantly associated with English self-efficacy, whereas vicarious experience and physiological states showed an insignificant relationship with English self-efficacy beliefs. Also, regarding the association between self-efficacy sources and mathematics self-efficacy, it was revealed that mastery experience ($r=0.17$, $p<0.005$), vicarious experience ($r=0.43$, $p<0.001$), and verbal persuasion ($r=0.25$, $p<0.001$) were significantly correlated with mathematics self-efficacy, whereas physiological state showed an insignificant relationship with maths self-efficacy.

Also, Joët et al. (2011) piloted a study on 395 elementary school learners in France. The major aim of the research was to examine whether there exists an association between self-efficacy sources and mathematics and French self-efficacy. Correlational analyses revealed that all the four self-efficacy sources were significantly correlated with mathematics self-efficacy. The 'r' values are as follows: mastery experience ($r= 0.62$, $p<0.001$), vicarious experience ($r= 0.17$, $p<0.001$), verbal persuasion ($r= 0.60$, $p<0.001$), physiological state ($r= -0.35$, $p<0.001$). Furthermore, the correlational analyses regarding self-efficacy sources and French self-efficacy revealed that mastery experience ($r= 0.60$, $p<0.001$), verbal persuasion ($r= 0.52$, $p<0.001$), and physiological state ($r= -0.35$, $p<0.001$) were

significantly associated with French self-efficacy. However, vicarious experience showed an insignificant relationship.

Also, Usher and Pajares (2009) conducted a study in USA on 803 middle school students to determine the correlation among mathematics self-efficacy sources and mathematics skills self-efficacy. Results revealed that three self-efficacy sources, including mastery experience ($r= 0.62$, $p<0.001$), vicarious experience ($r= 0.43$, $p<0.001$), and verbal persuasion ($r= 0.52$, $p<0.001$) were positively and significantly associated with mathematics self-efficacy, whereas physiological state ($r= -0.44$, $p<0.001$) was significantly but negatively associated with maths self-efficacy. Lastly, Kaya and Bozdag (2016) piloted a study on 698 middle and high school learners in Turkey. The chief objective of the study was to determine the association between mathematics self-efficacy and science self-efficacy. Results revealed that three self-efficacy sources, i.e., mastery experience ($r=0.52$, $p<0.01$), vicarious experience ($r=0.49$, $p<0.01$), verbal persuasion ($r=0.46$, $p<0.01$) depicted a strong positive relationship with science self-efficacy. However, physiological ($r= -0.12$, $p<0.05$) state showed a weak and negative relationship with science self-efficacy.

The rest of the researchers conducted studies regarding learning self-efficacy sources, English self-efficacy sources, teachers' self-efficacy sources, writing self-efficacy sources (Arslan, 2012; Bryant, 2017; Hampton & Mason, 2003; Kudo & Mori, 2015; Lin, 2016; Phan & Ngu, 2016; Pajares et al., 2007; Tschannen-Moran & McMaster, 2009).

It is noteworthy that a greater part of research was conducted in the USA and the sample of majority of studies consisted of school students. For instance, Bryant (2017) explored the impact of self-efficacy sources and evolving self-efficacy beliefs on the students' motivation in the USA. The sample was 18 school students of grade ten, three school teachers, a school principal and a guidance counsellor. The study was purely qualitative in nature and interviews were conducted to collect data. The findings revealed that self-efficacy beliefs were developed in every student due to the development of self-efficacy sources generally and mastery experience particularly. It was also revealed that efficacy sources growth occurred due to the positive and negative experiences experienced by them in their life. Finally, it was revealed that the development of motivation depends upon perceived self-efficacy of the students that was gained from all the four sources. Similarly, Pajares et al. (2007) piloted a study on 1256 students of grade four to 11 in USA. The key objective of the study was to establish the strength of relationship between writing self-efficacy sources and writing self-efficacy. Findings revealed that mastery experience ($r=0.61$, $p<0.0001$), vicarious experience ($r=0.22$, $p<0.0001$), and verbal persuasion ($r=0.44$, $p<0.0001$) were positively and significantly correlated with writing self-efficacy beliefs. However, physiological state ($r=-0.35$, $p<0.0001$) showed a significant but negative relationship with writing self-efficacy.

Likewise, Hampton and Mason (2003) also conducted a study in the USA. The sample consisted of 278 high school students having learning disabilities. He found that all the four self-efficacy sources were significantly correlated with self-efficacy beliefs. Lastly, Tschannen-Moran and McMaster (2009) determined the impact of three self-efficacy

sources (mastery experience, vicarious experience, and verbal persuasion) on the teaching instruction self-efficacy beliefs of 93 primary level school teachers in USA. They employed a quasi-experimental research design involving four treatments. They introduced all the three self-efficacy sources during four treatments. Results indicated that all the three self-efficacy sources influenced the self-efficacy beliefs of the teachers.

Other than the USA, research regarding self-efficacy sources and self-efficacy beliefs was conducted in other countries as well. For instance, Phan and Ngu (2016) determined the association between self-efficacy sources and self-efficacy beliefs by using the sequential predictive model in Australia. The sample of the research was 328 elementary school students. Questionnaire was used to gather the data. The data was collected at three different times of one calendar year. The results at Time one indicated that, out of four sources, only vicarious and mastery experience showed a positive significant relationships with self-efficacy. At Time two, only mastery experience showed a significant relationship. At Time three, three sources remained significant, i.e., mastery experience, physiological state and verbal persuasion.

Likewise, Arslan (2012) conducted a study on 1049 6th and 8th Grade students in Turkey to determine the association between four self-efficacy sources and their learning self-efficacy beliefs. A substantial relationship was found between three self-efficacy sources and self-efficacy beliefs: mastery experience ($r= 0.606$, $p<0.01$), verbal persuasion ($r= 0.435$, $p<0.01$), vicarious experience ($r= 0.331$, $p<0.01$). However, physiological state ($r= 0.289$, $p<0.01$) showed a weak relationship with self-efficacy. Similarly, Kudo and Mori

(2015) conducted a quantitative study on 159 7th grade students in Japan to determine the effect of two self-efficacy sources, i.e., mastery experience and vicarious experience on self-efficacy beliefs. He employed a pre-test/post-test research design. Results indicated that mastery experience had a significant impact on self-efficacy. On the other hand, vicarious experience had no substantial effect on self-efficacy beliefs.

Lastly, Lin (2016) carried out a study to determine the association between three kinds of self-efficacy, i.e., learning self-efficacy, computer self-efficacy, and programming self-efficacy and the sources of self-efficacy on the basis of gender and persistence among university students. The sample of the study was 1,073 university undergraduate learners majoring in computing science. A quantitative research design was employed in this study and questionnaires were used for data collection. The outcomes revealed that gender had no significant effect on self-efficacy sources. All the three kinds of self-efficacy were significantly associated with self-efficacy sources. The value of 'r' ranged from 0.15 to 0.79 at $p < .001$ for all the relationships.

From the review of the above studies, it is worth mentioning that majority of the studies focused on science and mathematics self-efficacy sources. It was revealed that there was dearth of research regarding the association between reading self-efficacy sources and self-efficacy beliefs. Also, Cantrell et al. (2013) suggested to the future researchers that research needs to be conducted to find the association between self-efficacy sources and reading self-efficacy beliefs which will consequently enrich the insights regarding the self-efficacy construct. The researcher of the present research considered the recommendations given

by Cantrell et al. (2013) and consequently examined the association between self-efficacy sources and reading self-efficacy beliefs.

The current section has reviewed the studies related to self-efficacy sources with various academic variables. The next section reviews the studies regarding the association between metacognitive reading strategies and self-efficacy beliefs.

2.8 Studies Related to Metacognitive Strategies and Self-efficacy Beliefs

There are several researchers who conducted research on the association between self-efficacy beliefs and metacognitive strategies (Ahmadian & Pasand, 2017; Bonyadi, Nikou, & Shahbaz, 2012; Jee, 2015; Kargar & Zamanian, 2014; Kassem, 2015; Keskin, 2014; Li & Wang, 2010; Mokhtar, 2015; Naseri & Zaferanieh, 2012; Nosratinia, Saveiy, & Zaker, 2014; Sönmez & Durmaz, 2017; Stracke, 2016; Taghinezhad et al., 2015; Tavakoli & Koosha, 2016; Tuncer & Dogan, 2016; Uçar, 2016; Yailagh et al., 2013; Yang & Wang, 2015; Yılmaz, 2010; Zarei & Gilanian, 2015). The literature matrix of these studies is shown in Appendix N.

Tuncer and Dogan (2016) conducted a study on 271 Turkish EFL engineering students in which the relationship between metacognitive strategies awareness, self-efficacy beliefs and language anxiety was investigated. A quantitative method of research was employed in this study. The outcomes of the study revealed that there was a negative significant association between self-efficacy and metacognitive strategies.

The study conducted by Tuncer and Dogan (2016) is criticised due to the fact that its sample size is limited to only one department, i.e., engineering department. Consequently, generalising the results of this study to the students of other disciplines is doubtful.

Similar to the above study, Uçar (2016) also conducted the study in Turkey to find the association between self-efficacy and the usage of the six reading strategies, including metacognitive, affective, memory, cognitive, social and compensation reading strategies by 150 University Turkish EFL learners studying in a foreign language department. A quantitative research method was employed in this study. The instruments used in the study to find the level of self-efficacy and the strategies used by the students were 'self-efficacy scale' adapted from Gahungu (2007) and 'scale for language learning strategy use' developed by Oxford (1990) respectively. The outcomes of the study disclosed that there was a positive significant association between self-efficacy and the reading strategies' usage generally and metacognitive strategies particularly.

To a substantial degree, Tuncer and Dogan's (2016) study was similar to Uçar's (2016) study as far as the research objectives are concerned. Furthermore, similarity can be found in terms of the location of the research, i.e., both were conducted in Turkey. Additionally, the method of data collection is also the same, i.e., questionnaires were used in both studies. However, in terms of findings, both are opposite to each other, such as findings of Tuncer and Dogan (2016) revealed a negative significant relationship. On the contrary, the results of Uçar's (2016) study disclosed that there was a significant and positive association between self-efficacy and the use of metacognitive strategies. Uçar (2016) conducted

research on the students who were majoring in English, whereas Tuncer and Dogan (2016) conducted a research on engineering department students. The nature of sample could be the reason of the opposite findings in the above two studies. The students in Uçar's (2016) study were majoring in English. So, they would be potentially better regarding metacognitive reading strategies' usage as compared to the engineering students of Tuncer and Dogan's (2016) study. The strength of sample in Tuncer and Dogan's (2016) study is 271 students, whereas in Uçar's (2016) study, the strength is 150 students. So, regarding the strength of sample, Tuncer and Dogan's (2016) study can be considered more reliable than Uçar (2016).

Similarly, Yılmaz (2010), like the above two studies, investigated the relationship between the strategies that Turkish university students use while learning English, including metacognitive strategies and the self-efficacy beliefs. The study's sample consisted of 140 university students majoring in English. He also added additional variables, i.e., gender and language proficiency. Data was collected by using questionnaires. From the findings, it was found that more proficient learners used metacognitive strategies more frequently as compared to less proficient learners. In terms of gender, both male and female learners employed the metacognitive strategies equally. Finally, it was disclosed that there was a significant and positive association between metacognitive strategies' usage and self-efficacy beliefs.

Similar to the studies conducted by Tuncer and Dogan (2016) and Uçar (2016) regarding the association between self-efficacy and metacognitive strategies, Yılmaz (2010) also

conducted the study on the same variables. Furthermore, all the three studies were conducted on Turkish university students. However, Yılmaz (2010) and Uçar (2016) are similar in terms of results, i.e., a significant positive relationship between self-efficacy and metacognitive strategies but Tuncer and Dogan's (2016) study has revealed opposite results, i.e., a negative significant relationship between the two variables.

Some researchers employed a pre-test/ post-test research design and introduced metacognitive reading strategies instruction as a treatment (McCrudden et al., 2005; Taghinezhad et al., 2015; Tavakoli & Koosha, 2016; Yang & Wang, 2015). For instance, Tavakoli and Koosha (2016) conducted a study involving the effect of metacognitive strategy instruction on the self-efficacy and reading comprehension of the English language. The sample comprised 100 Iranian university learners. The tools used for collection of data were questionnaires and Reading comprehension test. Sample was segregated into experimental and control group. Experimental group was exposed to metacognitive strategies instruction. Results revealed a positive significant relationship between metacognitive instruction/self-efficacy and reading comprehension. Similarly, Taghinezhad et al. (2015) conducted a study on 90 Iranian EFL upper-intermediate level students. The researcher divided the sample into two groups, i.e., experimental and control group. Metacognitive strategies were taught to experimental group. The findings indicated that the experimental group outclassed the control group. Moreover, regarding gender, it was discovered that both male and female students used metacognitive strategies on almost equal basis. Lastly, it was found that learners' self-efficacy beliefs were positively associated with the teaching of metacognitive reading strategies.

In the same way, Yang and Wang (2015) investigated the association between self-efficacy, language learning strategies, including metacognitive strategies and strategy instruction. The objective of the study was to find either the correlation between strategy instructions, language learning strategies and self-efficacy exists or not. The sample consisted of 78 Taiwanese ESL college students. A quantitative method was used in the study and two kinds of questionnaires were employed to gather data. The findings revealed that as compared to strategy instruction, the association between self-efficacy and the learning strategies including metacognitive strategies is more significant. Furthermore, it was found that the students started applying more strategies after the strategy instruction. Lastly, McCrudden et al. (2005) piloted a study on 23 4th grade learners in USA. They employed a pre-test/post-test research design. The learners were exposed to metacognitive strategies instruction during the treatment. It was found that students' reading self-efficacy level escalated from pre-instruction ($M = 18.87$, $SD = 2.03$) to post-instruction ($M = 20.78$, $SD = 2.83$).

Jee (2015) investigated the use of learning strategies with self-efficacy beliefs. The sample consisted of 92 Korean university learners who were separated into two groups, i.e., high and low-achievement groups. Research was conducted by utilising quantitative research design. The instrument to measure the use of language strategies was SILL by Oxford (1990) and for measuring self-efficacy beliefs, Jee (2015) developed self-efficacy questionnaires based on SILL (Oxford, 1990). The outcomes revealed that there was a positive significant association between all the strategies, including metacognitive strategy and the self-efficacy beliefs. Moreover, low-achievement students outperformed the high-

achievement students in terms of usage of metacognitive strategies. Also, Mokhtar (2015) conducted a quantitative study on 109 university level learners in Malaysia. He discovered that metacognitive language strategies ($r=0.540$, $p<0.05$) were positively and significantly correlated with self-efficacy beliefs. Also, metacognitive strategies were reported to be the most preferred strategies.

The three studies discussed above, i.e., Jee (2015), Mokhtar (2015), and Ucar (2016) examined the same six strategies and all of them used same instruments to measure use of strategies, i.e., SILL by Oxford (1990). Similarly, the results of three studies were also the same, i.e., a significant positive association between self-efficacy and metacognitive strategies.

Contrary to the majority of the previous studies being reviewed, i.e., Jee (2015), Mokhtar (2015), Tavakoli and Koosha (2016), Tuncer and Dogan's (2016), Yılmaz (2010), and Uçar (2016) which were conducted on university level students, Rahimi and Abedi (2014) conducted a study on high school students. This study was conducted to determine the relationship between listening metacognitive awareness and listening self-efficacy beliefs among 371 students. The outcomes of the study revealed that the listening self-efficacy was positively and significantly related with metacognitive awareness of listening strategies. Similarly, Yailagh et al. (2013) also conducted research on high school students. The relationship between self-efficacy and metacognition was investigated in this study. The sample consisted of 230 female high school students. A quantitative research method was employed to conduct the study. Questionnaires were used as data collection tools.

Statistical analysis disclosed that self-efficacy and metacognition were positively correlated to each other.

However, the study by Yailagh et al. (2013) can be criticised due to the reason that only female students were included in the sample. Therefore, generalising the outcomes of the current study to the other gender can be dubious. Yailagh et al. (2013) is criticised due to the fact that they overlooked the inclusion of enough strength of opposite gender in their sample of study. Yailagh et al. (2013) study has only female students in the sample. Therefore, generalising the results on opposite gender can be doubtful.

Some researchers conducted studies on primary and secondary level school students to determine the association between self-efficacy and self-efficacy sources. For instance, Stracke (2016) conducted a study to examine an association between language learning strategies and self-efficacy beliefs. The research was quantitative in nature and conducted in Indonesia. The sample consisted of 522 grade six students with the majority of female students, i.e., 62%, whereas male students were 38%. The average age of the sample was 11 years. The findings revealed that out of all the strategies, metacognitive strategies were used most frequently. Also, it was found that high self-efficacious learners employed more metacognitive strategies than low self-efficacious students. Likewise, Magogwe and Oliver (2007) piloted a study on 480 primary, secondary and tertiary level students in Botswana. They found that metacognitive strategies were moderately correlated with self-efficacy beliefs of the students.

Several researchers determined the relationship between self-efficacy sources and self-efficacy beliefs of those students who were majoring in English language (Ahmadian & Pasand, 2017; Ghavamnia et al., 2011; Kassem, 2015; Nosratinia et al., 2014; Wong, 2005; Zarei & Gilanian, 2015). For instance, Ahmadian and Pasand (2017) conducted a study 63 Iranian university students, majoring in English language. Metacognitive reading strategies were divided into three types (global, problem-solving, and support strategies). To collect data, two questionnaires, i.e., 'Online Survey of Reading Strategies' (OSORS) and 'reading self-efficacy questionnaire' were used. Results revealed that all the three strategies, i.e., global strategies ($r=0.88$, $p<0.01$), problem-solving strategies ($r=0.92$, $p<0.01$), and support strategies ($r=0.86$, $p<0.01$) were significantly correlated with reading self-efficacy beliefs.

Also, Ghavamnia et al. (2011) conducted a study on 80 university undergraduate female students majoring in Applied Linguistics in Iran. They conducted a correlational analysis to determine an association between metacognitive language learning strategies and language learning self-efficacy. Findings revealed that there was a positive and significant relationship between metacognitive strategies and self-efficacy beliefs. In the same way, Zarei and Gilanian (2015) investigated the association between metacognitive strategies and different types of self-efficacy, i.e., self-regulatory, general and academic self-efficacy. The sample included 147 Iranian university students majoring in English. A quantitative method was used to conduct the study and data was collected by using questionnaires. It was revealed that metacognitive strategies along with compensation and memory strategies were positively associated with academic self-efficacy.

Likewise, Sönmez and Durmaz (2017) piloted a study on 35 university level EFL students majoring in ELT in Turkey. The questionnaires, 'Listening Strategy Use Questionnaire' adopted from (Chen, 2010) and 'Listening Efficacy Questionnaire' adopted from Rahimi and Abedini (2009) were used to collect data. They found that listening metacognitive strategies were positively and significantly correlated with listening self-efficacy of the students. Similarly, Kassem (2015) piloted a quantitative study on 84 sophomores, majoring in English in Egypt. He found that listening metacognitive strategies ($r=0.58$, $p<0.1$) were positively and significantly correlated with listening self-efficacy beliefs. Lastly, Nosratinia et al. (2014) piloted a research on 150 EFL university students who were majoring in English literature. In this study, a relationship between learning strategies' use, metacognitive awareness and the perceived self-efficacy of students was determined by using a quantitative method of research. The outcomes of the study revealed that there was a positive significant association between the metacognitive awareness and self-efficacy, self-efficacy and language strategies usage, metacognitive awareness and use of strategies.

Kargar and Zamanian (2014) explored the relationship between reading strategies and self-efficacy beliefs of the EFL Iranian students who were considered as advanced English learners. The aims of the study were to determine the relationship between self-efficacy and reading strategies, to determine the extent of differences between male and female in terms of self-efficacy level and use of metacognitive strategies. The sample of the study comprised 50 students, including 28 females and 22 males. The method used in this research was quantitative in nature. It was found that there was a positive significant relationship between reading strategies and self-efficacy beliefs of the learners.

Furthermore, it was also revealed that both male and female students were almost equal in terms of self-efficacy level and the use of reading strategies. Kargar and Zamanian's (2014) study can be criticised due to its small sample size. Consequently, it could be challenging to deduce the results owing to validity and duplicating issue.

In the same way, Naseri and Zaferanieh (2012) conducted a study to determine the relationship between three variables, i.e., reading comprehension level, self-efficacy and the use of reading strategies by the students. Its sample consisted of 80 students, including both male and female students. Two questionnaires and one reading comprehension were used in this study to collect the data quantitatively. The results of the study indicated that there was a positive correlation of reading self-efficacy with reading comprehension and the reading strategies including metacognitive strategies. Additionally, gender made no significant difference regarding self-efficacy and use of metacognitive strategies.

Naseri and Zaferanieh's (2012) study is in line with Kargar and Zamanian's (2014) study regarding the role of gender. In both of these studies, gender made no significant difference in terms of level of self-efficacy and using metacognitive reading strategies. Furthermore, both of them were also related to each other in terms of the research objectives. In addition, the findings of both studies found that there was a significant positive correlation between self-efficacy beliefs and reading strategies including metacognitive reading strategies.

Zare and Mobarakeh (2011) conducted a study to determine the association between self-efficacy and the reading strategies, i.e., metacognitive, social/affective and cognitive

strategies. The sample of the research contained 45 students. Two questionnaires were employed to collect the data quantitatively. The outcomes indicated that self-efficacy beliefs are positively and significantly associated with the reading strategies' usage including metacognitive strategies.

Zare and Mobarakeh's (2011) study is similar to Kargar and Zamanian's (2014) study in terms of low sample. The former has sample of 45 students and latter has 50 students. The sample size of both these studies was smallest as compared to all the other reviewed studies in terms of quantitative research. Consequently, it could be challenging to deduce the results owing to validity and duplicating issues.

Similar to the study of Zare and Mobarakeh (2011), Li and Wang (2010) investigated the relationship between self-efficacy beliefs and reading strategies, including cognitive, metacognitive and social/affective reading strategies. The aims of the study were to find association between strategies usage and self-efficacy beliefs. Furthermore, it aimed to find out whether self-efficacy influenced the reading strategies. The sample of the study included 182 Chinese first semester university students. This study was conducted by using a quantitative research method and questionnaires were used as a data collection tool. The findings revealed that there was a positive significant relationship between self-efficacy beliefs and the use of reading strategies including metacognitive reading strategies. Additionally, it was also found that more reading strategies were used by those students whose self-efficacy level was high as compared to low self-efficacious students.

Similarly, Cera, Mancini and Antoniette (2013) conducted a study to determine the association between metacognition and few other variables, i.e., autonomy, self-efficacy and self-regulation. The sample of the study was 130 students of high school. The outcomes indicated a positive correlation between metacognition and the other three variables, i.e., self-efficacy, autonomy and self-regulation.

Aydin, Uzuntiryaki and Demirdöğ'en (2011) conducted a study in which they tested the relationship between task value and self-efficacy with metacognitive self-regulation as a mediator. The sample consisted of 518 students studying in a college. A quantitative method was used in which research tools consisted of questionnaires. Analysis was done by using a statistical software, i.e., PLS. Findings revealed a significant association between task value and self-efficacy. Furthermore, significant influence of metacognition on self-efficacy beliefs of the students was also found. Likewise, Keskin (2014) investigated the relationship between metacognitive reading strategies and task value with reading self-efficacy as a mediator. The sample of the study consisted of 370 middle school students of 5th, 6th, 7th and 8th grade. The study was purely quantitative in nature. Questionnaires were employed to gather the data. The outcomes disclosed that there was a significant association between self-efficacy and metacognitive strategies. Additionally, self-efficacy was also significantly correlated to the task value.

Aydin et al. (2011) and Keskin (2014) used the same variables in their study. However, there was a difference in both studies in terms of mediator. Aydin et al. (2011) used metacognitive self-regulation as a mediator, whereas Keskin (2014) used self-efficacy as a

mediator and he also suggested that self-efficacy should be used as a mediator in other studies to make it more generalizable. The researcher would act upon the suggestion and would employ reading self-efficacy as a mediator between self-efficacy sources and reading comprehension.

There were only few researchers who examined the relationship between metacognitive strategies and self-efficacy beliefs by employing a mixed-methods research approach (Purdie & Oliver, 1999; Shang, 2010; Wong, 2005). For instance, Shang (2010) conducted the research on the relationship between self-efficacy/use of metacognitive strategies and the reading comprehension. The sample included 53 Taiwanese university students, including 36 females and 17 males. A mixed-methods research approach was employed to conduct Shang's (2010) study. Questionnaires were employed to gather quantitative data and interviews were conducted to gather qualitative data. The findings revealed that out of three strategies, metacognitive strategies were used most frequently. Moreover, a positive significant association between self-efficacy and reading strategies use was found. Interviews' results found that students use different strategies in different specific circumstances.

Likewise, Wong (2005) conducted a mixed-methods study on 74 ESL pre-service teachers in Malaysia. Both qualitative and quantitative findings indicated that metacognitive language learning strategies were moderately associated with language self-efficacy beliefs. Additionally, it was found that high self-efficacious teachers employ more metacognitive strategies than low self-efficacious teachers. Lastly, Purdie and Oliver

(1999) conducted a mixed-methods study on 58 bilingual children in Australia. Their age ranged from nine to twelve. They found that metacognitive strategies ($r=0.453$, $p<0.01$) were positively and significantly correlated to language learning self-efficacy beliefs.

Due to scarcity of mixed-methods approach studies conducted regarding the association between self-efficacy and metacognitive strategies, the researcher filled this methodological gap by employing a mixed-methods research design in the present study. Lastly, only one study, i.e., Bonyadi et al. (2012) indicated an insignificant relationship between metacognitive strategies and self-efficacy beliefs. In addition, findings revealed that the students used metacognitive strategies most frequently. Lastly, gender made no significant influence in predicting self-efficacy and use of metacognitive strategies.

The findings of Bonyadi et al. (2012) are opposite to the findings of all the studies being reviewed above. Kargar and Zamanian (2014), Keskin (2014), Li and Wang (2010), Naseri and Zaferanieh (2012), Nosratinia, Saveiy and Zaker (2014), Shang (2010), Taghinezhad et al. (2015), Tavakoli and Koosha (2016), Tuncer and Dogan (2016), Uçar (2016), Yailagh et al. (2013), Yang and Wang (2015), Yılmaz (2010), and Zarei and Gilanian (2015) have found that there is a positive significant relationship between self-efficacy beliefs and metacognitive strategies. However, Bonyadi et al. (2012) revealed that there was no significant relationship between two variables. Thus, the present study would offer some insights in this area and address these contradictory findings by conducting research on the relationship between metacognitive reading strategies and reading self-efficacy beliefs.

2.9 Studies Related to Self-efficacy Beliefs and Reading Comprehension

A great number of studies were conducted to investigate the association between self-efficacy beliefs and reading comprehension. Majority of the studies indicated a positive significant association between two variables (Al Barwani & Al Mekhlafi, 2016; Al Ghraibeh, 2014; Aro et al., 2018; Galla et al., 2014; Ghabdian & Ghafournia, 2016; Habibian & Roslan, 2014; Hager, 2017; Hedges & Gable, 2016; Lee & Jonson-Reid, 2016; McGirt, 2017; Oh, 2016; Osman, Al Khamisi; Tabrizi & Jafari, 2015; Rachmajanti & Musthofiyah, 2017; Tobing, 2013). On the other hand, few studies indicated an insignificant association between self-efficacy beliefs and reading comprehension (Booth, Abercrombie, & Frey, 2017; Carroll & Fox, 2017; Eslami & Fatahi, 2008; Lau, 2009b; Piran, 2014; Wilson & Kim, 2016; Yilmaz, 2011). The detailed summaries of the above mentioned studies are provided in Appendix O.

Majority of the research was conducted on primary level school students. For instance, Coddington and Guthrie (2009) conducted a study on grade one, primary school children in USA. According to students' perceptions, the correlation between reading self-efficacy and reading performance was significant when analysis was run, including both male and female sample. However, when analysed separately, male sample's self-efficacy was correlated to reading performance, whereas no correlation between reading self-efficacy of the female sample and their reading performance was found. Similarly, Galla et al. (2014) conducted a longitudinal study of three years on 135 primary school students in USA. Their age ranged from five to 12 years (Kindergarten to 6th grade). The outcomes indicated that academic self-efficacy was significantly correlated to reading performance.

In the same way, Liew, McTigue, Barrois and Hughes (2008) conducted a longitudinal study on 733 (lower achieving in literacy) primary school students of grade one to three in USA. It was found that academic self-efficacy positively associated with reading achievement across all waves. Likewise, Lee and Jonson-Reid (2016) piloted a study on 881 primary school students of grades one, two and three in USA. Pre and post-test research design was employed in conducting study. Findings indicated that self-efficacy was significantly correlated to reading achievement. Furthermore, Nevill (2008) determined the correlation between reading self-efficacy and reading achievement of 84 primary level school learners of grade four, five and six of both genders. Their age ranged from nine to 12 years. Findings revealed that reading self-efficacy was significantly correlated to reading achievement. Also, the findings of Piercey's (2013) study, who piloted a study on 364 primary school learners in USA, found a significant positive association between reading self-efficacy and reading performance. Hager (2017) also conducted a research on 43 2nd grade, primary school students in USA and found a significant association between reading self-efficacy and reading achievement.

Solheim (2011), unlike above discussed studies, conducted a study in Sweden. The sample of his research consisted of 217 primary school students of the grade five. He introduced two different reading comprehension test formats, i.e., 'multiple choice comprehension test' (MC) and 'critical response comprehension test' (CR). Results indicated that reading self-efficacy significantly predicted reading comprehension performance in both test formats. Also, Wilson and Kim (2016) conducted a study on a small sample of 42 primary school students in South Korea. Findings disclosed that there was no association between

academic self-efficacy and reading comprehension performance. Similarly, Carroll and Fox (2017) determined the association between reading self-efficacy and reading comprehension. The study sample consisted of 179 primary school students in England. They also found an insignificant relationship between the two variables. Results of last two discussed studies (Wilson & Kim; Carroll & Fox, 2017) were different from all the studies discussed above, as they found an insignificant relationship between two variables among primary school students sample. Lastly, Aro et al. (2018) conducted a study on 82 elementary school students in Finland. They found a significant and positive association between reading self-efficacy and reading comprehension fluency.

Some of the researchers considered a sample of high school learners to determine the association between self-efficacy and reading performance. For example, McGirt (2017) piloted a study on 15 8th grade students to determine the association between academic self-efficacy and reading comprehension performance. The findings indicated a significant and positive association between both variables. Moreover, Schöber, Schütte, Köller, McElvany & Gebauer (2018) performed a longitudinal study on 1597 secondary school students in Germany. Data was collected at two times. Findings revealed that reading achievement at T1 influenced reading self-efficacy at T2 significantly. However, reading self-efficacy at T1 showed insignificant influence on reading achievement at T2.

Also, Guthrie, Klauda and Ho (2013) performed a study on 1159 grade seven school learners in USA. They employed a pre and post-test research design. One group was exposed to special reading instruction. Findings revealed that self-efficacy was positively

correlated to reading comprehension in both the classrooms, i.e., traditional and intervention language arts classrooms. Similarly, Mucherah and Yoder (2008) piloted a study on 388 6th and 8th grade students in USA. The main objective of their study was to determine the association of reading self-efficacy with reading performance. Findings showed that reading self-efficacy was significantly associated to reading achievement. Additionally, 8th grade students outperformed 6th grade students in terms of self-efficacy level. Also, Hedges and Gable (2016) conducted a mixed-methods research on 498 junior high school students in USA. Quantitative results revealed that reading self-efficacy of all the grades was significantly correlated with reading achievement. Furthermore, qualitative findings supported the quantitative findings.

Likewise, Klassen (2010) conducted a study on 146 high school students in Canada. The sample was further sub-divided into two groups, i.e., 'learning disabilities' (LD) group and 'non-learning disabilities' (NLD) group. Findings revealed that both groups showed a significant association between reading self-efficacy and reading achievement. Additionally, it was found that NLD group scored higher in terms of both reading self-efficacy level and reading test score than LD group. Likewise, Osman et al. (2016) considered a sample of 636 Omani 4th and 10th grade learners to determine the association between self-efficacy beliefs and reading achievement. Outcomes revealed that there was a strong correlation between two variables. Furthermore, grade four learners outperformed grade ten learners in terms of self-efficacy beliefs as well as reading achievement. Also, Salehi and Khalaji (2014) conducted a mixed-methods research on 48 Iranian upper intermediate students and found that self-efficacy had a significant association with reading

comprehension performance. Additionally, qualitative findings complemented the quantitative findings.

Similarly, in terms of high school sample, several researchers conducted research in Far Eastern countries. For example, Liem, Lau and Nie's (2008) study on 1475 grade nine students in Singapore disclosed that there was a significant and positive association between self-efficacy and reading comprehension achievement. Murad Sani and Zain (2011) determined the association between English reading self-efficacy and English reading comprehension ability. The sample comprised 200 high school learners. Findings showed positive significant association between two variables. In the same way, Tobing (2013) found a positive significant association between reading self-efficacy and reading comprehension achievement in his research on 66 high school students in Indonesia. Additionally, it was found that Self-efficacy caused 20 % of the prediction to the reading comprehension performance. Also, Su and Wang (2012) conducted a study on 281 junior high school learners in Taiwan. The findings revealed that there was a positive significant correlation between English reading self-efficacy and English reading proficiency. Additionally, gender did not make any difference regarding the relationship between two variables.

Lastly, Booth et al. (2017) conducted a mixed-methods study on a sample of 874 high school learners in USA. This study is unique from above mentioned studies in terms of high school students as it showed an insignificant association between academic self-efficacy and reading achievement. Additionally, qualitative findings gathered from

interviews indicated that Hispanic students shared most positive comments about self-efficacy, whereas Black students shared most negative comments regarding self-efficacy.

Also, several researchers focused on university students to determine the correlation between self-efficacy beliefs and reading performance. As, Al Ghraibeh (2014) selected a sample of 63 university students in Saudi Arabia. The outcomes of the study revealed that there was a positive significant relationship between reading self-efficacy and reading comprehension. Also, level of reading self-efficacy increased with the increase in age. Also, Habibian and Roslan (2014) selected a very unique sample of 64 post-graduate students studying in Malaysian universities. Their findings indicated a significant positive association between reading self-efficacy and reading comprehension. Likewise, Oh (2016) conducted a quantitative study on 95 university students in Korea. The key objective of the study was to determine the relationship between four types of perceived self-efficacy (authentic reading, text-based, linguistic knowledge, and general) and L2 reading proficiency. Outcomes indicated that all the four types of self-efficacy are significantly correlated with L2 reading proficiency.

Some researchers, selected a particular sample of those university students who were majoring in English language or literature (Ghonsooly, 2010; Naseri & Ghabanchi, 2014; Naseri & Zaferanieh, 2012; Shang, 2010; Tabrizi & Jafari, 2015). Shang (2010) found a significant association between self-efficacy beliefs and reading comprehension performance in his study on 53 Taiwanese university learners, majoring in English language. Likewise, Tabrizi and Jafari (2015) conducted a quantitative study on 300

Iranian university learners, majoring in English literature. They divided the sample into three language proficiency levels, i.e., elementary, intermediate, and advanced level. Findings revealed that the extent of correlation between self-efficacy and reading comprehension among intermediate proficiency level students was strongest followed by advanced and elementary proficiency level students respectively.

Ghonsooly (2010) selected a sample of 150 students, majoring in English literature from three Iranian universities. It was found that there was a significant association between reading self-efficacy and reading comprehension achievement. Also, it was revealed that students who had high self-efficacy level scored higher in reading comprehension test as than the students with low level of self-efficacy. Naseri and Ghabanchi (2014) found a positive and significant relationship between reading self-efficacy and reading comprehension achievement in their study conducted on 81 Iranian university students majoring in English. Lastly, Naseri and Zaferanieh's (2012) study sample consisted of 80 university students, majoring in English literature and translation. They also found a significant and positive association between reading self-efficacy and reading comprehension level. Furthermore, gender made no difference in the association between reading self-efficacy and reading comprehension.

Lastly, regarding university level learners, Yoğurtçu's (2012) study revealed different findings as compared to the other studies discussed studies. He selected a sample of 556 university students in Kyrgyzstan. The major objective of his study was to determine the association between reading comprehension self-efficacy and reading skills. Findings

indicated that reading comprehension self-efficacy was significantly correlated to reading skills for high self-efficacious students. However, for low self-efficacious students, there was no significant relationship between the two variables.

Few researchers conducted studies on students attending English language learning institutions (Ghabdian & Ghafournia, 2016; Piran, 2014; Rachmajanti & Musthofiyah, 2017). Ghabdian and Ghafournia (2016) performed a study on 120 language school learners in Iran. Results showed that there was a significant and positive association between self-efficacy beliefs and reading comprehension ability. Piran (2014) also conducted a study in Iran on a sample of 92 Iranian EFL learners studying in a language institution to determine the correlation between reading self-efficacy and reading comprehension performance. It was found that there was no association between reading self-efficacy and reading comprehension performance. Lastly, Rachmajanti and Musthofiyah (2017) piloted a study on 208 Indonesian EFL students of both genders between age of 19 and 24. Findings indicated that there was a significant association between reading self-efficacy and reading comprehension achievement, in case of male sample, whereas in case of female sample, there was no correlation between the two variables.

Jones, Varberg, Manger, Eikeland and Asbjørnsen (2012) conducted a study on 600 male and female imprisoned adults in Norway. The major objective was to determine the impact of reading self-efficacy on their reading performance. They employed ‘reading and writing self-efficacy scale’ adopted from Shell et al. (1995) to determine reading self-efficacy. However, to evaluate their reading performance, two tests were employed, i.e., ‘reading

and spelling test for college and university students' adopted from Stromso, Hagtvet, Lyster, and Rygvold (1997), 'reading speed test' adopted from Handal (1964). They found significant positive correlation between reading performance and reading self-efficacy.

Lastly, few researchers determined the association between self-efficacy and reading performance by considering teachers as their study's sample (Coddington & Guthrie, 2009; Eslami & Fatahi, 2008; Yilmaz, 2011). For example, in Coddington and Guthrie's (2009) study, eight female teachers participated in the study to fill a questionnaire about their students' self-efficacy beliefs and reading performance. According to teachers' perceptions, the correlation between both male and female students' reading self-efficacy and reading performance was significant. Contrary to their findings, two studies were found which indicated that there was no association between self-efficacy and reading performance of the teachers (Eslami & Fatahi, 2008; Yilmaz, 2011).

2.10 Theoretical Framework

The theoretical framework of the present study was created on the basis of reviewed literature and identified theoretical gaps in research. Theoretical framework is illustrated in Figure 2.2 below to test the proposed hypotheses. Moreover, this section explains underpinning as well as supporting theories in detail.

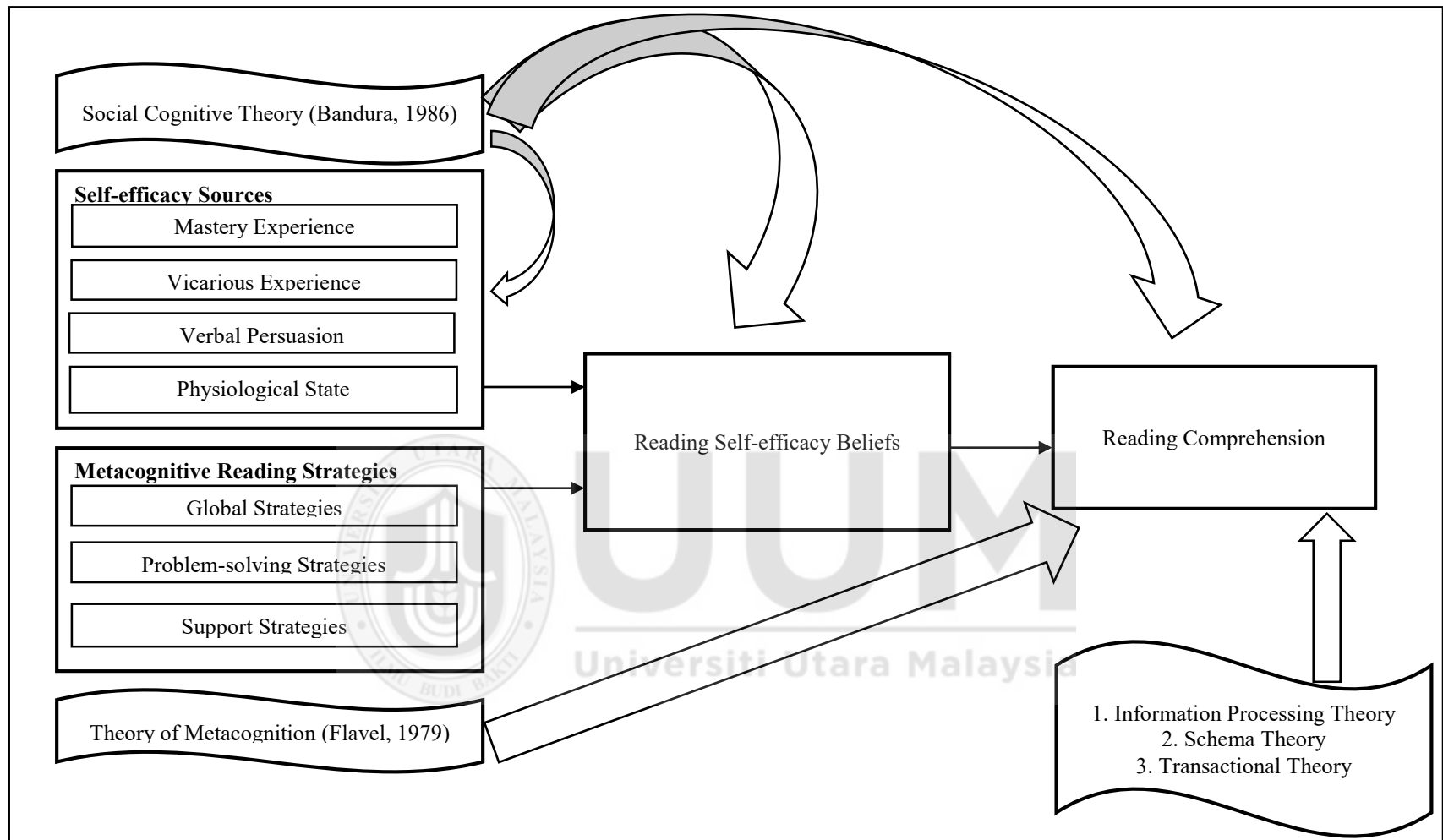


Figure 2.2 Theoretical Framework

2.10.1 Underpinning Theories

In the current study, two underpinning theories have been employed namely social cognitive theory (SCT) and theory of metacognition (TOM). These two theories are explained in detail in the coming sections.

2.10.1.1 Social Cognitive Theory

Social cognitive theory, unlike the previous theories of behaviour which consider the individual's behaviour as a response to environmental stimuli (Bandura, 2001), brings to light the collaboration between an individual, environment around him and its behaviour (Herz, Schunk & Zehnder, 2014). The model of triadic reciprocity explains the relationship between these three variables, as shown in Figure 2.3.

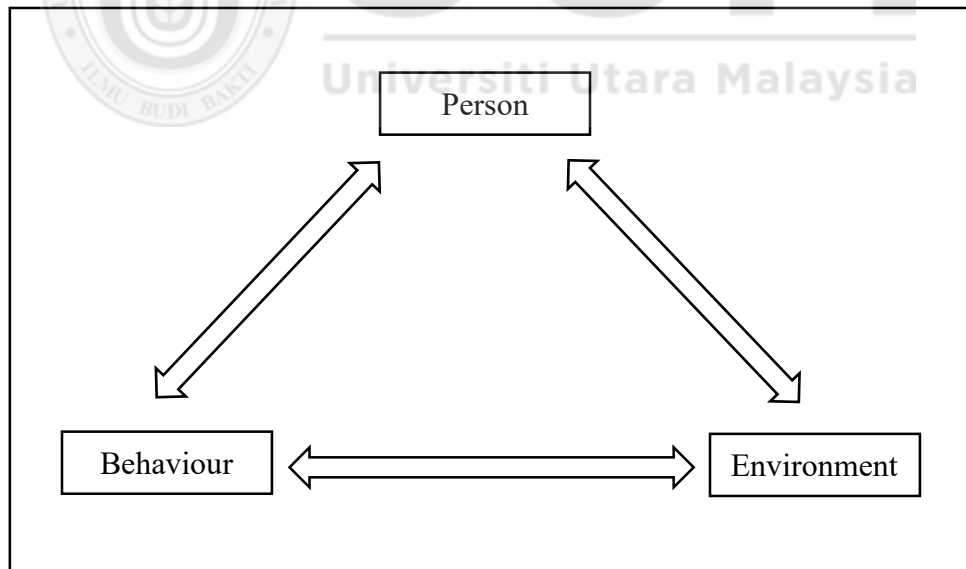


Figure 2.3. Model of Triadic Reciprocity. Adapted from “Social cognitive theory of organizational management” by R. Wood, & A. Bandura, 1989, *Journal of Social and Clinical Psychology*, 4(3), p.362. Copyright 1989 by Academy of Management.

Self-efficacy beliefs are responsible for strengthening the relationship of the individual and his/her behaviour. Furthermore, self-efficacy beliefs can be nurtured in the environment which consequently is positively correlated to achievement (Bandura, 1997). Self-efficacy beliefs originate from several intellectual and environmental sources (Bandura, 1997; Dörnyei & Ushioda, 2011; Herz et al., 2014). Bandura categorised these sources as: mastery experiences, vicarious experiences, verbal persuasion and emotional or physiological states (Bandura, 1997).

Social cognitive theory further declares that events in a peoples' life get influenced by their actions and they have following attributes: self-organisation, self-regulation, and self-reflection (Bandura, 2006). For the purpose of accomplishing the set goals, people use different strategies and create certain plans. This anticipation and visualisation of the future encourages the behaviour of the people. To conclude, people are concerned about self-reflection and as a consequence, they retrospect their personal efficacy as well (Bandura, 2006).

Self-efficacy refers to one's viewpoints about one's ability to have a control over the incidents influencing one's life (Bandura, 1989). Reading performance is significantly influenced by self-efficacy (Al Ghraibeh, 2014; Guthrie et al., 2013; Jones et al., 2012; Lee & Jonson-Reid, 2016; Piercey, 2013; Schunk & Zimmerman, 2007). It was found that the learners get higher grades, persevere for a long time, and accept challenges who have high self-efficacy (Pajares, 1996; Schunk & Zimmerman, 2007). It is anticipated by the learners who have high self-efficacy that they would be challenged while reading the written

material and they have a strong belief in their capabilities that they would successfully endure those challenges (Afflerbach, Cho, Kim, Crassas, & Doyle, 2013). However, the learners who have low self-efficacy happened to perform only unsophisticated tasks or they did not perform the tasks whatsoever (Mills, Pajares, & Herron, 2006). High self-efficacy is of great importance in the life of the learners because it gives them the required motivation to move forward in his/her future academic life. The areas in which they are weak can be strengthened by remembering the past experiences and putting efforts in it and vice versa (Pressley & Gaskins, 2006; Zimmerman, Bandura, & Martinez-Pons, 1992).

Self-efficacy is also considered as an essential constituent of the learners' motivation and, consequently, reading comprehension levels were potentially affected by the motivation levels of the learners (Guthrie et al., 2007). It was observed that those learners who have little interest and low efficacy in reading performed poorly in comprehension as compared to the learners who have more interest (Guthrie et al., 2007).

Researchers found that there is a connection between the use of metacognition and self-efficacy (e.g., Kargar & Zamanian, 2014; Keskin, 2014; Naseri & Zaferanieh, 2012; Nosratinia, Saveiy & Zaker, 2014; Taghinezhad et al., 2015; Tavakoli & Koosha, 2016; Tuncer & Dogan, 2016; Uçar, 2016; Yailagh et al., 2013; Yang & Wang, 2015; Zarei & Gilanian, 2015 etc). The results of the above study showed that all the variables, including self-efficacy and metacognitive strategies were correlated with each other. Thus, it is confirmed from above-mentioned studies that the learners persevere longer who have belief in their abilities about the completion of the task. Moreover, it was reported that they have

employed more cognitive and metacognitive strategies. According to Schunk and Zimmerman (2007), the two models, i.e., peer and adult models are also the cause of establishing self-efficacy in the learners; however, peer model is the most effective for their self-efficacy development (Schunk & Zimmerman, 2007). Schunk and Zimmerman (2007) declared that when a student observes the successful fellow learners, self-efficacy is generated that leads them to success in a specific task.

2.10.1.2 Theory of Metacognition

The current study employed theory of metacognition to support the second independent variable, i.e., metacognitive reading strategies. It has been proposed by John Flavell in 1979. Metacognition denotes “knowledge and cognition about cognitive phenomena” (Flavell, 1979, p. 906). The definition of metacognition can be segregated into two parts: (a) knowledge of cognition, i.e., reading a text, recollection of thoughts, and learning, and (b) regulation of knowledge (e.g., plotting and scrutinising) that control thinking (Jacobs & Paris, 1987). Metacognition consists of comprehension and self-scrutinising of memory (Flavell, 1979), and this knowledge of the procedures of cognition can be imparted into others’ minds as well (Jacobs & Paris, 1987).

According to Jacobs and Paris (1987), metacognition can be divided into two groupings: (a) cognitive self-assessment, and (b) managing one’s own thinking. Cognitive self-assessment contains declarative, procedural, and conditional knowledge. Declarative knowledge implies what the learner knows, i.e., the learner knows that reading comprehension would improve by using reading strategies. Procedural knowledge implies

recognition of the process of cognition, i.e., a reader knows how to use specific reading strategies to make the process of reading smooth. Lastly, conditional knowledge implies recognition of the situations that affect learning, i.e., a reader knows which situation requires using specific strategies and the reasons why these strategies are used (Jacobs & Paris, 1987).

According to Jacobs and Paris (1987), the procedure of transferring cognitive knowledge into an action is called self-management of cognition. This self-management of thinking can be achieved with scheming and cognitive ways of accomplishing any task. The second element of self-regulation is the continuing process of the assessment, i.e., for assessing the progress, the readers pause or synopsis the text. The third and last element is control over their strategies in which the readers have control over their progress of using the strategies. The readers can amend and modify the strategies during revision (Jacobs & Paris, 1987). The objectives of the metacognitive experiences can be twofold, i.e., cognitive and metacognitive. The progress of cognition is made possible by employing cognitive strategies, whereas to monitor the cognitive progress, metacognitive strategies are used (Flavell, 1979).

The use of reading strategies is strongly related to the metacognition. For the greater insight of the world and having command over it, the learners need to know the vitality of these strategies. They should also have knowledge about their usage, i.e., in which situations to use these strategies, the purpose of using them and how to use them (Harvey & Goudvis, 2013).

During the whole reading process, strategies are used by good readers, i.e., before the start of reading, in the middle and after they are done with reading (Pressley & Gaskins, 2006). Good readers set aims and make guesses before the start of reading. During the reading, they self-regulate their reading process to check whether they understand the text or not. Good readers make clarifications and synopsis the text after the reading process. For the improvement of reading comprehension, metacognitive reading strategies should be taught necessarily as the knowledge of metacognition lets the readers know where and when to employ specific reading strategies (Duffy et al., 1987; Pressley & Gaskins, 2006).

2.10.2 Supporting Theories

The current study employed three supporting theories to support the dependent variable (i.e., reading comprehension). The theories regarding the processes of reading were developed with the aid of patterns stated by the reading research experts. These reading theories talk about the process of information storage and regulation of information in the brain. These well-known theories are: ‘the information processing theory’, ‘schema theory’, and ‘transactional theory’.

2.10.2.1 Information Processing Theory

This theory attempts to describe how prior information is saved, how latest information is attained from the written text, and what are the procedures included in it. It asserted that temporary memory has restricted space, thus knowledge is treated in small portions due to the restricted space in temporary memory (Miller, 1956). It was also of the perspective that procedures involved in information processing in both the human’s brain and the computer

are quite similar; written text is comprehended by the sensual registers, after that identified knowledge is saved for the time being in temporary memory, and eventually that stored knowledge may be shifted and saved in permanent memory (Ali-Hassan, 2005; Huitt, 2000, 2003). Cognitive psychology utilises example of computer to elucidate the process of knowledge storage in human's brain.

Anderson (1983) and Anderson (1985) presented an additional theoretical supposition regarding information processing. It was depicted in the theoretical model that there are two kinds of knowledge saved in permanent memory, i.e., declarative knowledge (what are we aware of regarding facts and information) and procedural knowledge (what we are acquainted to do something, e.g., pragmatics, capabilities, experiential knowledge). These two kinds of knowledge are employed in the subsequent order: Cognitive phase (acquiring declarative knowledge intentionally), associative phase (recognition and removal of mistakes, and intensifying the bond between the components of the skill), and lastly, autonomous stage (performance happens to be spontaneous) (O'Malley & Chamot, 1990).

2.10.2.2 Schema Theory

According to Albeckay (2011) schema theory disclosed that in what way information is represented and in what way that information could be utilised to aid readers in a certain way. It posited that information is stored in memory in the form of structures. These imaginary structures are termed as schemas/schemata. This particular information, comprises imaginary structures, stored in one's memory has a relation with one's life situations and locations (Nassaji, 2007). A large amount of knowledge processing hinges

on these fundamental structures. These packs or constituents of knowledge (schemata) signify our views regarding different things, situations, incidents, sequences of incidents, and actions (Rumelhart, 1980). Thus, schemata are employed in the process of comprehending sensory information, in recovering data from memory, in managing actions, in establishing objectives and sub-objectives, in assigning resources, and largely, in regulating the course of processing system.

Schemata does not only contain knowledge but also consists of information regarding usage of knowledge, which possibly contains images, background knowledge and others. Therefore, it can be concluded that schema is an intangible knowledge structure obtained from recurring involvements with different things and incidents (Paivio, 2007). It is intangible due to the reason that it synopsis information regarding several diverse kinds of examples and it is structured for the reason that it presents the information in a sequence in which it was stored earlier. Fetzer and Meierkord (2002) asserted that schema theory is related to knowledge saved in the memory that is extremely important to comprehend new information and can be assumed as interrelating knowledge structures.

2.10.2.3 Transactional Theory

This theory came into light from Rosenblatt's (1968, 1969, 1978, 1985a, 1985b, 1993, 1994) opinions on reading. It presumed that both the text and the reader are not the distinct entities rather they are a singular component. Two types of reading are produced as a result of interaction among the text and the reader: aesthetic reading (when a person reads efficiently, passionately, and with delight); and efferent reading (when a person involves

mentally and hunts for facts). Readers, generally, keep on switching from one kind of reading to another while reading different types of texts. Thus, reading comprehension was described as a “continuous developing process” (Palmer, 1981, p. 64).

The next section is about the proposition of the hypotheses based on the studies reviewed earlier in this chapter.

2.11 Hypotheses Development

Based on the related literature reviewed in the current chapter, the present section is allocated to the development of hypotheses that are aligned with the research objectives and questions of the current study, as stated in Chapter One. The subsequent sub-sections shed light on the hypotheses tested in the present study.

2.11.1 The Relationship between Self-efficacy Sources and Reading Self-efficacy Beliefs

Bandura (1986), the originator of social cognitive theory (SCT), affirmed that self-efficacy beliefs originate from four self-efficacy sources (i.e., mastery experience, vicarious experience, verbal persuasion, and physiological state). Furthermore, review of the studies involving relationship between self-efficacy sources and self-efficacy beliefs in Section 2.8 revealed that there was a significant relationship between two variables (Arslan, 2012; Bryant, 2017; Chen & Usher, 2013; Joët et al., 2011; Kaya & Bozdog, 2016; Kudo & Mori, 2015; Lin, 2016; Lin & Tsai, 2018; Phan, 2012; Phan & Ngu, 2016; Tschannen-Moran & McMaster, 2009; Usher & Pajares, 2009). Moreover, Cantrell et al. (2013) recommended

that research needs to be done to find the relationship between self-efficacy sources and reading self-efficacy beliefs, which will consequently enrich the insights regarding the self-efficacy construct. The researcher of the present research considered the recommendation given by Cantrell et al. (2013) and consequently enquired about the relationship between self-efficacy sources and reading self-efficacy beliefs.

Hence, based on the reviewed literature and recommendations given by Cantrell et al. (2013), the following hypotheses were tested:

H₁: There is a significant relationship between mastery experience and reading self-efficacy beliefs among Saudi EFL learners.

H₂: There is a significant relationship between vicarious experience and reading self-efficacy beliefs among Saudi EFL learners.

H₃: There is a significant relationship between verbal persuasion and reading self-efficacy beliefs among Saudi EFL learners.

H₄: There is a significant relationship between physiological state and reading self-efficacy beliefs among Saudi EFL learners.

2.11.2 The Relationship between Metacognitive Reading Strategies and Reading Self-efficacy Beliefs

The majority of the reviewed studies (refer to Section 2.9) showed a significant correlation between self-efficacy beliefs and metacognitive strategies (Ahmadian & Pasand, 2017; Naseri & Zaferanieh, 2012; Jee, 2015; Kargar & Zamanian, 2014; Kassem, 2015; Keskin,

2014; Mokhtar, 2015; Nosratinia et al., 2014; Sönmez & Durmaz, 2017; Stracke, 2016; Taghinezhad et al., 2015; Tavakoli & Koosha, 2016; Tuncer & Dogan, 2016; Uçar, 2016; Yailagh et al., 2013; Yang & Wang, 2015; Zarei & Gilanian, 2015). However, Bonyadi et al., (2012) found an insignificant relationship between self-efficacy beliefs and metacognitive strategies.

As majority of the studies found significant relationship between two variables, thus, the following hypotheses were generated:

H₅: There is a significant relationship between global metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

H₆: There is a significant relationship between problem-solving metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

H₇: There is a significant relationship between support metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

2.11.3 The Relationship between Reading Self-efficacy Beliefs and Reading Comprehension

An extensive review of the related literature was conducted involving studies regarding the relationship between self-efficacy and reading comprehension (refer to Section 2.10). The majority of the studies found that self-efficacy was significantly correlated to reading comprehension (Al Ghraibeh, 2014; Galla et al., 2014; Guthrie et al., 2013; Jones et al., 2012; Klassen, 2010; Lee & Jonson-Reid 2016; Liem et al., 2008; McGirt, 2017; Osman

et al., 2016; Piercey, 2013). However, only few studies indicated that there was an insignificant relationship between the two variables (Booth et al., 2017; Carroll & Fox, 2017; Piran, 2014; Wilson & Kim, 2016; Yilmaz, 2011). Thus, the following hypothesis was formulated:

H₈: There is a significant relationship between reading self-efficacy beliefs and reading comprehension among Saudi EFL learners.

2.11.4 Reading Self-efficacy beliefs as a Mediator between Reading Self-efficacy Sources and Reading Comprehension

The review of the literature revealed that there was scarcity of research studies involving the relationship between self-efficacy sources (i.e., independent variables) and reading comprehension (i.e., dependent variable). According to Preacher et al. (2007), mediator can be introduced between independent and dependent variables, even if there is no relationship between them. However, independent variable ought to be significantly correlated to the mediating variable. Furthermore, the mediating variable ought to be significantly correlated to the dependent variable.

Therefore, after an extensive literature review, it was found that self-efficacy sources (i.e., independent variables) were significantly correlated to self-efficacy (i.e., mediating variable) (Arslan, 2012; Bryant, 2017; Chen & Usher, 2013; Joët et al., 2011; Kudo & Mori, 2015; Kaya & Bozdog, 2016; Lin & Tsai, 2018; Lin, 2016; Phan, 2012; Phan & Ngu, 2016; Tschannen-Moran & McMaster, 2009; Usher & Pajares, 2009). Also, self-efficacy

was significantly correlated to reading comprehension (i.e., dependent variable) (Al Ghraibeh, 2014; Galla et al., 2014; Guthrie et al., 2013; Jones et al., 2012; Klassen, 2010; Lee & Jonson-Reid, 2016; Liem et al., 2008; Osman et al., 2016; Piercey, 2013). Furthermore, numerous studies employed self-efficacy as a mediator to determine the relationship between self-efficacy sources and other variables and the findings revealed that self-efficacy successfully mediated the relationship between them (Hampton & Mason, 2003; Phan & Ngu, 2016; Poortvliet & Darnon, 2014). Therefore, on the basis of the above discussion, the following hypotheses were generated:

H₉: Reading self-efficacy beliefs mediate the relationship between mastery experience and reading comprehension among Saudi EFL learners.

H₁₀: Reading self-efficacy beliefs mediate the relationship between vicarious experience and reading comprehension among Saudi EFL learners.

H₁₁: Reading self-efficacy beliefs mediate the relationship between verbal persuasion and reading comprehension among Saudi EFL learners.

H₁₂: Reading self-efficacy beliefs mediate the relationship between physiological state and reading comprehension among Saudi EFL learners.

2.11.5 Reading Self-efficacy beliefs as a Mediator between Metacognitive Reading Strategies and Reading Comprehension

The review of the literature disclosed that there was a significant relationship between metacognitive reading strategies and reading comprehension (Ahmadi et al., 2013; Hou, 2013; Ismail, 2014; Rastegar, Kermani & Khabir, 2017; Zhang & Seepho, 2013). However, a limited research was conducted in which three constructs, i.e., metacognitive reading

strategies, reading self-efficacy, and reading comprehension were assessed in a single framework. Therefore, in the current study, the relationship between metacognitive reading strategies and reading comprehension was assessed by using reading self-efficacy as a mediating variable.

Numerous studies provided ample evidence that there was a significant relationship between metacognitive reading strategies and self-efficacy beliefs (Ahmadian & Pasand, 2017; Jee, 2015; Kargar & Zamanian, 2014; Kassem, 2015; Keskin, 2014; Mokhtar, 2015; Nosratinia et al., 2014; Sönmez & Durmaz, 2017; Stracke, 2016; Taghinezhad et al., 2015; Tavakoli & Koosha, 2016; Tuncer & Dogan, 2016; Uçar, 2016; Yang & Wang, 2015; Zarei & Gilanian, 2015). Also, a significant relationship was found between self-efficacy and reading comprehension (Al Ghraibeh, 2014; Galla et al., 2014; Guthrie et al., 2013; Jones et al., 2012; Klassen, 2010; Lee & Jonson-Reid 2016; Liem et al., 2008; Osman et al., 2016; Piercey, 2013). Thus, on the basis of justifications and reviewed literature presented above, the following hypotheses were proposed:

H₁₃: Reading self-efficacy beliefs mediate the relationship between global metacognitive reading strategies and reading comprehension among Saudi EFL learners.

H₁₄: Reading self-efficacy beliefs mediate the relationship between problem-solving metacognitive reading strategies and reading comprehension among Saudi EFL learners.

H₁₅: Reading self-efficacy beliefs mediate the relationship between support metacognitive reading strategies and reading comprehension among Saudi EFL learners.

2.12 Summary

This chapter was distributed into seven major sections. The first section provided the definitions and models of reading comprehension. The second section discussed language learning strategies, which has further explained reading strategies and their major taxonomies. In the third section, the concepts of metacognition and metacognitive reading strategies were explained extensively. The fourth section elucidated self-efficacy and reading self-efficacy beliefs. The fifth section explained self-efficacy sources and related studies regarding these sources. In the sixth section, recent studies that were conducted to explain the relationship between self-efficacy sources and self-efficacy beliefs, metacognitive reading strategies and reading self-efficacy beliefs, reading self-efficacy beliefs and reading comprehension were reviewed. In the last section, theoretical framework was presented. Also, hypotheses were developed on the basis of the reviewed literature. The following chapter explains the methods adopted for the present research. It also explicates sampling, instrumentation, processes of data collection and analysis and, lastly, ethical considerations.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The present chapter explains in detail about the techniques and methods that were employed in this study (see Figure 3.1). It demarcates the research design and explains the sample size and the research tools used in this study.

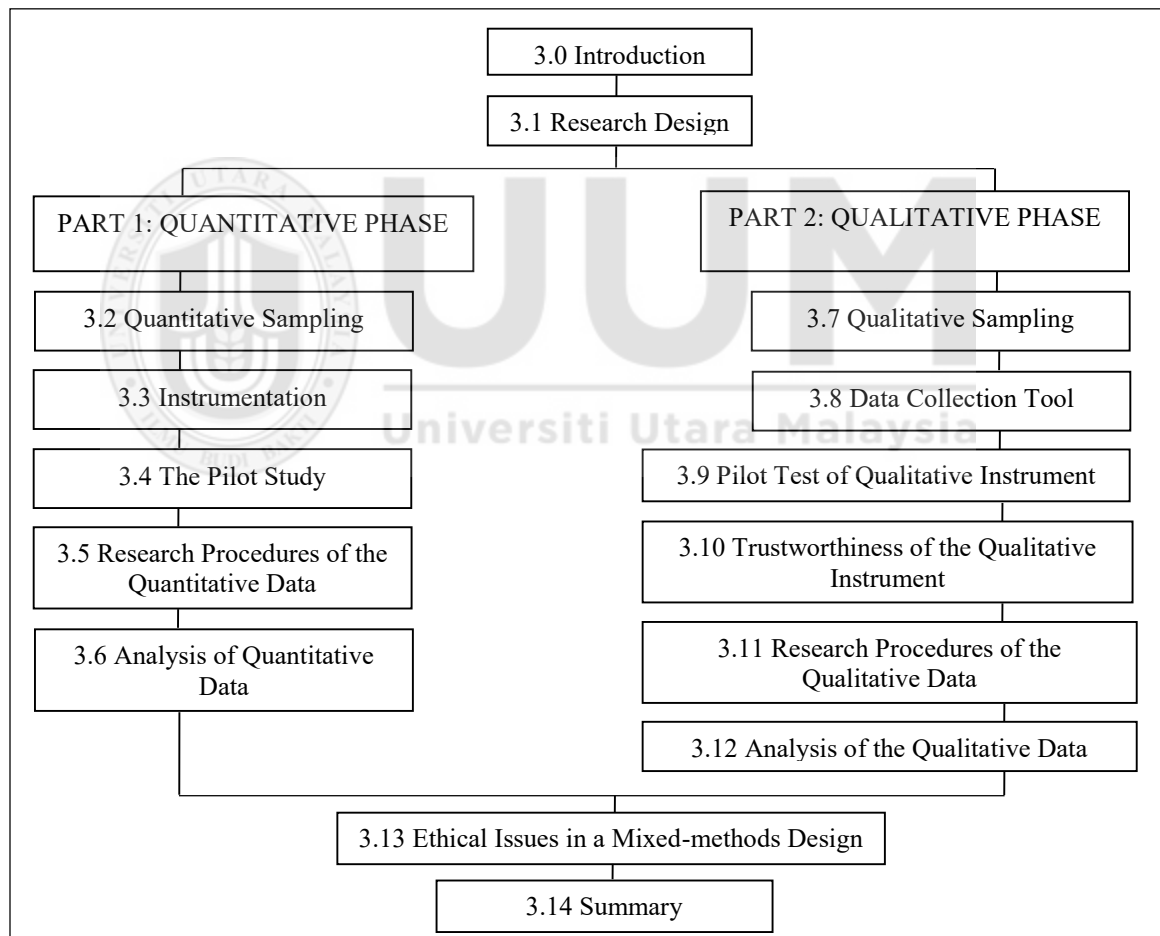


Figure 3.1. The Organisation of Chapter Three

In addition, the current chapter also elucidates the procedures used during the collection of data. Moreover, this chapter explains the techniques used for data analysis. Lastly, ethical issues are addressed.

3.1 Research Design

Among the aims of this study was to determine the hierarchical order of metacognitive reading strategies and self-efficacy sources. Also, it intended to determine the level of reading self-efficacy as well as reading comprehension. Furthermore, it aimed at determining the role of self-efficacy sources/metacognitive reading strategies in the reading comprehension by employing reading self-efficacy beliefs as a mediator. Therefore, ten research questions were formulated, as mentioned in Section 1.4. In order to answer the research questions, the current study employed a mixed-methods research design, which involved a series of questionnaires, a reading comprehension test and semi-structured interviews.

A mixed-methods research design can be defined as a research process for gathering, analysing, and combining both quantitative and qualitative data at a specific phase of the research procedure within the same study to get a deeper insight of the research problem (Creswell, 2005; Tashakkori & Teddlie, 2003). Furthermore, there are many types of mixed-methods research design, including the convergent parallel design, the explanatory sequential design, the exploratory sequential design, the embedded design, the transformative design, and the multiphase design (Creswell, 2002). The current research employed the explanatory sequential research design (refer to Figure 3.2). In this particular

research design, quantitative data is collected and analysed first. Thereafter, qualitative data is collected and analysed (Creswell, 2002).

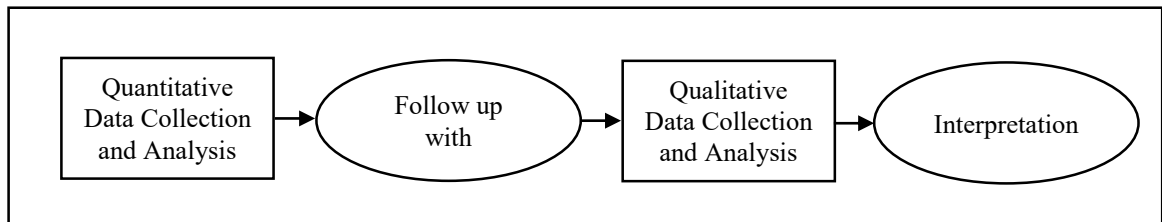


Figure 3.2. Explanatory Sequential Design. Reprinted from *Educational research: Planning, conducting, and evaluating quantitative* (p. 541), by J.W. Creswell, 2002, Upper Saddle River, NJ: Prentice Hall. Copyright 2002 by John W. Creswell.

Furthermore, Molina-Azorin (2007) states that the main objective of using an explanatory sequential research design is to evaluate the variables with a large sample first (quantitative phase), followed by a small sample (qualitative phase) in order to explore the variables in greater detail. In the current study, firstly, the researcher determined the relationships between self-efficacy sources/metacognitive reading strategies and reading comprehension by using a mediator, i.e., reading self-efficacy. Data was collected from a large sample of 383 EFL learners. Subsequently, a small sample of six learners were interviewed and asked about their perceptions regarding the influence of aforementioned independent variables on dependent variable (i.e., reading comprehension). This was conducted in order to get a more robust and deep insight about the variables.

The justifications of employing a mixed-methods research design for the current study is explained hereafter. Firstly, by using a mixed-methods approach, a researcher is able to answer those questions that cannot be answered solely by using either qualitative or quantitative research methods. For instance, in the current study, the relationships among

variables were determined by using quantitative research approach. Additionally, qualitative research approach was employed in order to explore the factors responsible for those relationships. Secondly, a mixed-methods approach gives strength to the data and, consequently, the flaws of both qualitative and quantitative approaches can be balanced. As a consequence, the limitations of both the methods can be compensated by the combination of strong points of both methods (Creswell & Plano, 2011). For instance, quantitative approach does not allow a researcher to explore the phenomena in greater detail. Thus, by adding qualitative approach, a researcher can overcome this particular weakness of quantitative approach.

Thirdly, a mixed-methods research is preferable over quantitative research due to the reason that the former gives an opportunity to a researcher to examine the phenomena in a wider and deeper perspective (Hammersley, 2000). For instance, with respect to the present study, the researcher examined the relationships among variables quantitatively. However, by conducting interviews, Saudi EFL learners' perspectives regarding the influence of self-efficacy sources and metacognitive reading strategies on reading comprehension were obtained in greater depth. In other words, if the researcher had constrained this research to only a quantitative research method, it would have given only statistical figures regarding the relationships among variables. Consequently, crucial and hidden viewpoints regarding these relationships would have been overlooked. Thus, a mixed-methods research design was employed to overcome such complications (Creswell, 2008; Hanson, Creswell, Clark, Petska, & Creswell, 2005; Johnson & Christensen, 2007; Tashakkori & Teddlie, 2003).

Lastly, a mixed-methods research design was employed in the current study due to the reason that there is dearth of mixed-methods studies conducted on the variables involved in the current study. Of the studies conducted on the relationship between self-efficacy sources and reading self-efficacy beliefs, limited research was conducted by using a mixed-methods research design. Furthermore, only four studies employed a mixed-methods approach in determining the relationship between metacognitive reading strategies and reading self-efficacy beliefs (Purdie & Oliver, 1999; Shang, 2010; Tavakoli & Koosha, 2016; Wong, 2005). Likewise, only five studies used a mixed-methods approach in establishing the relationship between reading self-efficacy beliefs and reading comprehension (Booth et al., 2017; Shang, 2010; Hager, 2017; Hedges & Gable, 2016; Salehi & Khalaji, 2014). Thus, it is apparent that there is insufficiency of mixed-methods studies conducted on the above-mentioned variables. Also, several researchers recommended to incorporate both quantitative and qualitative research designs in order to get a better insight of the variables involved in the current study (e.g., Usher & Pajares, 2008; Tsang et al., 2012; Poole, 2009). Therefore, the current study employed a mixed-methods design to fill this methodological gap.

PART 1: QUANTITATIVE PHASE

3.2 Quantitative Sampling

Creswell (2003) draws attention to three terminologies that survey researchers should consider, i.e., the population, the target population (i.e., sampling frame), and the sample. The subsequent sections explain these three features of sampling.

3.2.1 Population of the Study

According to Creswell (2003), population is a group of entities that have same attributes that differentiates them from other groups of entities. Moreover, according to Dornyei (2007), population is a band of individuals whom the research is related to. Therefore, the population of the present study was all male Saudi Preparatory-Year-Programme (PYP) learners studying in government universities in the central province of KSA. The central province has eight government universities for male learners, i.e., King Saud University, Qassim University, Shaqra University, Majmaah University, King Saud Bin AbdulAziz University for Health Sciences, Al-Imam Mohammed Ibn Saud Islamic University, Prince Sattam Bin AbdulAziz University, and Saudi Electronic University.

3.2.2 The Target Population (Sampling Frame)

Creswell (2003) and Dornyei (2007) affirmed that, generally, it is not possible for a researcher to study the whole population. Thus, in the research, a target population is being studied which comes under a more particular level as compared to the population. Creswell (2002) defined the sampling frame as "a group of individuals with some common defining characteristics that the researcher can identify and study" (p. 142). In the current study, data was collected from the Preparatory-Year-Programmes (PYPs) of the above-mentioned eight universities. In each university's PYP, there were several sections. Each section consisted of 25 learners approximately. Consequently, four sections consisting of 100 learners, from each of the eight universities became the sampling frame of the current study.

3.2.3 The Sample

This section gives detailed information about the sampling design and the sample size chosen for the present study.

3.2.3.1 The Sampling Design

With the intention of attaining the objectives of the study and to fulfil the condition of maximum representativeness, the present study employed proportionate stratified random sampling for selecting the quantitative sample. As explained earlier, data was collected from eight universities (stratas). Furthermore, a certain proportion of sample was selected from each of the eight universities (stratas) based on their respective population. For instance, the proportion of sample of ‘Al-Imam Mohammed Ibn Saud Islamic University’ was highest due to the reason that it had highest population as compared to other universities (refer to Table 3.1).

Lastly, from each university, the sample was selected randomly by employing simple random sampling. Dornyei (2007) asserts that "random samples are almost always more representative than non-random samples" (p. 97). When the researcher has an intention of giving equal chance to each entity to get selected from the population, this sampling is considered as the most appropriate (Creswell, 2008; Dornyei, 2007; Dornyei & CsizCr, 2012; Wagner, 2010). Additionally, its unique characteristic, i.e., the equal chance of being selected instead of a subjective or biased selection, brings about a large sample of parallel features as of the whole population, thus making it certain to generalise the findings to the

whole population (Creswell, 2008; Dornyei, 2007; Dornyei & CsizCr, 2012; Wagner, 2010).

Table 3.1

Proportion of Quantitative Sample

No.	Name of University	Population	Percentage	Questionnaires Distributed
1	King Saud University	953	21.33%	75
2	Qassim University	750	16.79%	59
3	Shaqra University	357	7.99%	28
4	Majmaah University	313	7.00%	25
5	King Saud Bin AbdulAziz University for Health Sciences	187	4.18%	16
6	Al-Imam Mohammed Ibn Saud Islamic University	1115	24.96%	86
7	Prince Sattam Bin AbdulAziz University	387	8.66%	30
8	Saudi Electronic University	404	9.04%	32
	TOTAL	4,466	100%	351

It is worth mentioning that in order to collect a random sample in each university (strata), the researcher employed a ‘RAND-BETWEEN’ feature in Microsoft Excel. As mentioned above, each university’s PYP consisted of several section. Each section was assigned a particular number and put in Microsoft Excel sheet. The ‘RAND-BETWEEN’ feature generated four random sections. Thus, the researcher collected the data from these four sections in each of the eight universities.

3.2.3.2 The Sample Size

Regarding the rules for the selection of quantitative sample size, several researchers presented their own viewpoints. Some researchers did not point out any rules for the selection of quantitative sample size (e.g., Mertens, 2005; Newbay, 2010; Wagner, 2010). On the other hand, according to Roscoe's (1975) rule of thumb, the sample size of a study should be between 30 to 500 participants. Similarly, Dornyei (2007) has his own rule of thumb according to which the sample size should not be less than 100 participants.

Sampling tables were also developed by some researchers that help select the appropriate size of the quantitative sample (Bartlet, Kotrlik & Higgins, 2001; Cohen, 1969; Krejcie & Morgan, 1970). However, the present study followed the sampling table (refer to Appendix F), presented by Krejcie and Morgan (1970). The sampling table indicates that, for the population of 4500, the appropriate sample is 351. Thus, the sample of the current study was 351 Saudi EFL learners.

3.3 Quantitative Instrumentation

For the purpose of collecting quantitative data, a reading comprehension test and three questionnaires were used. The aforementioned instruments are explained in detail in coming sections.

3.3.1 Questionnaires

For the purpose of collecting data quantitatively, three main questionnaires were employed. The three main questionnaires used to deal with three variables are as follows,

‘questionnaire for sources of reading self-efficacy’ (see Appendix A), adapted from Dawit (2008) for measuring the level of sources of reading self-efficacy among the EFL learners, ‘reading self-efficacy questionnaire’ (see Appendix B), adapted from (Tobing, 2013) for measuring the reading self-efficacy beliefs of the EFL learners, and lastly, ‘survey of reading strategies’ (SORS) (see Appendix C), adapted from (Mokhtari & Sheorey, 2002) for measuring the perceived use of metacognitive reading strategies by the EFL learners .

3.3.1.1 Questionnaire for Sources of Reading Self-efficacy

With the intention to measure the level of sources of reading self-efficacy, ‘questionnaire for sources of reading self-efficacy’ was adapted from Dawit (2008). The researcher changed the wording of some statements by substituting appropriate words, deleting irrelevant words and changing tenses. The details regarding all the adapted items are explained in Section 3.4.1.1.2.1. As shown in Appendix A, there are 18 items in this questionnaire. Mastery experience, verbal persuasion, and physiological state have 4 items each, whereas vicarious experience has 6 items (3 related to observation of adults and 3 related to peers), as shown in Table 3.2. The adapted questionnaire has a Likert scale of one to five ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (5), unlike the scale used by Dawit (2008) in which the Likert scale has a range of 1 to 6. In the current study, six-point Likert scale was changed to five-point Likert scale due to reason that the latter would enhance the response quality and response rate and also decrease the frustration level among respondents (Babakus & Mangold, 1992; Sachdev & Verma, 2004).

Table 3.2

Reading Self-efficacy Sources Questionnaire's Categories and Items

Categories	Items
Mastery Experience	1,5,7,9
Vicarious Experience	Peers: 2,6,10 Adults: 8,14,15
Verbal Persuasion	3,16,17,18
Physiological State	4,11,12,13

Note. Adapted from *An investigation of the correlation among efficacy sources, students' self-efficacy and performance in reading and writing skills: Bahir Dar University in Focus* (p.103), by D. Amogne, 2008, Addis Ababa University, Addis Ababa, Ethiopia.

3.3.1.2 Reading Self-efficacy Beliefs Questionnaire

In order to measure the specificity of the beliefs of reading self-efficacy, the researcher adapted the 'reading self-efficacy beliefs questionnaire' developed by Tobing (2013). The researcher made minor changes in this questionnaire as compared to the previous one by adding few necessary words in some statements. The details related to the adapted items are explicated in Section 3.4.1.1.2.2. The number of items in this instrument is ten, as shown in Appendix B. Tobing (2013) used a 101-point Likert scale in his study. However, in the current study, the researcher modified it to a five-point Likert scale, in keeping with the other three questionnaires in the present study that also used a five-point Likert scale. Moreover, five-point Likert scale is preferable as compared to other scales as it increases the quality and response rate and reduces the level of frustration among the participants of the study (Babakus & Mangold, 1992; Sachdev & Verma, 2004).

3.3.1.3 Survey of Reading Strategies (SORS)

‘Survey of reading strategies’ (SORS) was employed to measure the use of reading strategies. This survey was developed by Mokhtari and Sheorey (2002) who adapted it from ‘metacognitive awareness of reading strategies inventory’ (MARSI), developed by Mokhtari and Reichard (2002). MARSI was developed to measure the use of reading strategies by the native speakers and has a limitation that it cannot measure the use of reading strategies by non-native EFL/ESL learners. Thus, SORS was modified by Mokhtari and Sheorey (2002) to measure the use of reading strategies by EFL/ESL learners. This instrument can measure three types of metacognitive reading strategies namely, global strategies, problem solving strategies, and support strategies (Mokhtari and Sheorey, 2002). The categories are shown in Table 3.3. Category identification (GLOB, PROB, SUP) was not revealed in the real questionnaire. The total number of items in this instrument is 30, as shown in Appendix C.

Table 3.3

SORS Categories and Items

Categories	Items
Global (GLOB)	1, 3, 4, 6, 8, 12, 15, 17, 20, 21, 23, 24, 27.
Problem solving (PROB)	7, 9, 11, 14, 16, 19, 25, 28.
Support (SUP)	2, 5, 10, 13, 18, 22, 26, 29, 30.

Note. Adopted from “Measuring ESL students' awareness of reading strategies” by K. Mokhtari & R. Sheorey. 2002, *Journal of Developmental Education*, 25(3), 2-11.

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A five-point Likert-scale was used, from 1 ('never') to 5 ('always'). Participants were asked to circle one out of five options. It is worth mentioning that the researcher did not make any changes in this questionnaire and hence adopted it as it is from the original source, i.e., Mokhtari and Sheorey (2002).

3.3.2 Multiple-choice Reading Comprehension Test

Reading comprehension was the dependent variable of the current study. Thus, to test the reading comprehension level of the students, an 'International English Language Testing System' (IELTS) (Academic) reading comprehension test was conducted (refer to Appendix D). IELTS reading comprehension test was adopted from a book named 'IELTS Reading Tests' (McCarter & Ash, 2001). The aforementioned book consisted of ten reading tests and each test comprised three reading passages. The researcher adopted four reading passages randomly from the book. Furthermore, each passage comprised five Multiple Choice Questions (MCQs). All the four reading passages comprised distinct content. For instance, the first passage was about creativity in human beings. The second passage was about the issue of dropout of learners from educational institutions. Furthermore, the third passage was about the issue of global warming. Lastly, the fourth passage was about the importance of communication skills among medical doctors.

There were two main rationales of choosing the IELTS reading comprehension test for the current study. Firstly, it was used frequently in the previous studies conducted in the EFL context (Alharbi, 2015; Khodabandehlou, Jahandar, Seyedi & Abadi, 2012; Rastegar, Kermani & Khabir, 2017; Zare, 2013). Furthermore, in the context of Saudi Arabia,

Alharbi (2015) used two text passages of the IELTS exam to determine the reading comprehension level of 75 Saudi Arabian EFL college learners. The participants of the current study were at the same education level and age as those participants in Alharbi's (2015) study. Thus, it was employed in the current study. Secondly, Alblowi (2016) claims that one of the purposes of 'Preparatory-Year-Programme' (PYP) in Saudi universities is to prepare the learners in such a way that they would be able to compete in English language exam, i.e., IELTS, Test of English as a Foreign Language (TOEFL), and the Preliminary English Test (PET). Thus, it was appropriate to use the IELTS reading exam for the Saudi PYP learners in the current study.

3.4 The Pilot Study

Pilot study was conducted to determine the validity and reliability of the instruments. The following headings explain them in detail.

3.4.1 Validity of the Quantitative Instrument

Validity implies the degree to which the tools, techniques or measures employed in a research truly measure what they are intended to measure (Lancaster, 2005). It refers to the proof that the tool, technique or method employed in a study is suitably measuring the proposed concept (Hair Jr. et al., 2010; Sekaran & Bougie, 2010). Greener (2008) advocated the significance of internal validity/face validity. He claimed that content validity is one of the significant features of data analysis.

3.4.1.1 Content Validity

The content validity of a data collection instrument is also known as face validity. It denotes the extent to which the items of an instrument measures what it is intended to measure (Creswell, 2008; DeVellis, 2012). The authentication of the content validity for the current study's quantitative instruments (i.e., questionnaires & reading comprehension test) was done through several steps.

3.4.1.1.1 Panel of Three Reviewers

Normally, a panel of reviewers is approached to get the questions validated (Creswell, 2008; Dornyei, 2007; Mertens, 2005). Thus, the researcher approached three English language lecturers from Universiti Utara Malaysia (UUM) to acquire evaluative feedback from them to determine whether all the items of the adapted questionnaires gauged what they were supposed to gauge for the current study (refer to Table 3.4 to see demographic details of questionnaire's reviewers) . The three reviewers were deemed as language specialists of their particular area of expertise in English language. Also, the selected reviewers completed their postgraduate degree from the UK and Australia which enriched their impression as certified specialists.

Table 3.4

Demographic Details of Reviewers

Reviewers	Designation	University (Department)
Reviewer 1	Associate Professor	UUM (SEML)
Reviewer 2	Senior Lecturer	UUM (SLCP)
Reviewer 3	Lecturer	UUM (SEML)

The researcher sent the research objectives of the current study along with three questionnaires (i.e., ‘Questionnaire for Sources of Reading Self-efficacy’, ‘Reading Self-efficacy Beliefs Questionnaire’, and ‘Survey of Reading Strategies’) and a reading comprehension test to the panel of reviewers for the purpose of assessing their content validity. The researcher sent the aforementioned documents to all of the three reviewers via email. Soon after, the researcher had a detailed conversation with them regarding the content validity. The researcher underwent a fruitful discussion and obtained valuable feedback from the reviewers. The feedback and recommendations offered by the reviewers are explained in subsequent sub-sections.

3.4.1.1.2 Modifications of the Quantitative Instrument

After getting feedback and recommendations from the panel of reviewers, the researcher made essential modifications to two questionnaires. However, as reviewers were satisfied with ‘Survey of Reading Strategies’ and an IELTS reading comprehension test, thus, no modifications were done to them. The modifications of each of the two questionnaires are presented separately in the following sub-sections.

3.4.1.1.2.1 Modifications in Questionnaire for Sources of Reading Self-efficacy

Table 3.5 presents the detailed explanation of the modifications made in all the items of ‘Questionnaire for Sources of Reading Self-efficacy’.

Table 3.5

Items Adapted in Questionnaire for Sources of Reading Self-efficacy

Item No.	Original Item	Revised Item	Explanation of Changes
1.	I got high grades in last semester's reading tasks and tests.	I am satisfied with my last semester's English reading tasks and tests.	1. The word 'English' was added. 2. Changed the whole item as the original item was not related to perceptions of students.
2.	My friends tend to avoid reading assignments.	My friends tend to avoid their English reading assignments.	1. Word 'English' was added. 2. Word 'their' was added.
3.	I feel confident when my parents tell me I am doing well at reading in English.	I feel confident when my parents tell me I am doing well at reading in English.	No changes.
4.	I felt nervous when I had problems understanding a passage.	I feel nervous when I have problems understanding a passage in English.	1. Change of past tense to present tense (e.g., 'felt' was changed to 'feel' and 'had' was changed to 'have'). 2. Word 'English' was added.
5.	I received good results in my school reading assignments.	I received satisfactory results in my English reading assignments.	1. Word 'English' was added. 2. Word 'good' was substituted with 'satisfactory'. 3. Word 'school' was deleted.
6.	I had close friend(s) whom I respected for reading achievement.	I have close friends whom I respect for their English reading achievements.	1. Change of past tense to present tense (e.g., 'had' was changed to 'have' and 'respected' was changed to 'respect'). 2. Bracket was removed (e.g., 'friend(s)' was changed to 'friends'). 3. A singular word was changed to plural by adding 's' (achievement was changed to 'achievements').
7.	I was not good at reading comprehension activities in my previous academic life.	I was not good at performing English reading comprehension activities in my school.	1. Two words were added (i.e., 'performing' and 'English') were added. 2. A phrase 'previous academic life' was substituted with a word 'school'.
8.	I admire good readers.	I admire good readers of English.	Word 'English' was added.

Table 3.5 (Continued)

Items Adapted in Questionnaire for Sources of Reading Self-efficacy

Item No.	Original Item	Revised Item	Explanation of Changes
9.	I have always had natural talent for reading comprehension.	I have always had a natural talent for English reading comprehension.	1. Article 'a' was added. 2. Word 'English' was added.
10.	I feel confident when other students in my class do well in reading.	I feel confident about my own reading ability when other students in my class also do well in reading in English.	1. A phrase 'about my own reading ability' was added. 2. Word 'also' was added. 3. Word 'English' was added.
11.	I am always anxious about reading task.	I am always anxious about doing an English reading task.	1. Word 'doing' was added. 2. Article 'an' was added. 3. Word 'English' was added.
12.	I noticed my heart pounding when I took reading test.	I notice my heart starts pounding when I take an English reading test.	1. Change of past tense to present tense (e.g., 'noticed' was changed to 'notice' and 'took' was changed to 'take'). 2. Article 'an' was added. 3. Two words were added (i.e., 'starts' and 'English').
13.	My mind goes blank and I am unable to think clearly when trying to read in English.	My mind goes blank and I am unable to think clearly when trying to read in English.	No changes.
14.	I usually appreciate my English teachers when they teach reading.	I usually appreciate my English teachers when they teach reading.	No changes.
15.	No one at home is good at reading in English.	No one at home is good at reading in English.	No changes.
16.	People often tell me that I am good at reading.	People often tell me that I am good at reading in English.	Word 'English' was added.
17.	My English teachers often encouraged me by praising my reading ability.	My English teachers often encourage me by praising my reading ability.	Change of past tense to present tense (e.g., 'encouraged' was changed to 'encourage').
18.	My classmates think that I understand everything in a reading passage in English.	My classmates think that I understand everything in an English reading passage.	1. Structure of sentence was changed. 2. Article 'a' was substituted with 'an'.

Firstly, an important alteration regarding the scale was made after two out of three reviewers advised to change the options of scale. The scale was changed from six-point scale to five-point Likert scale. Also, the names of the options were changed. For instance, the original scale, which had six options (i.e., ‘definitely false’, ‘mostly false’, ‘a little bit false’, ‘a little bit true’, ‘mostly true’, ‘definitely true’), was changed to the level of agreement (i.e., ‘strongly disagree’, ‘disagree’, ‘neutral’, ‘agree’, ‘strongly agree’). The reviewers were of the view that EFL learners could get confused between ‘definitely false’ and ‘mostly false’ options and consequently, the results of the study could get affected. Secondly, the font size of the questionnaire was changed from 10 to 12, based on recommendation of one of the reviewers.

Thirdly, Item 1 was changed almost completely as it was giving a notion of true or false option. For example, the statement in item 1 (i.e., ‘I got high grades in last semester’s reading tasks and tests’) was changed to ‘I am satisfied with my last semester’s English reading tasks and tests’. Fourthly, it was suggested to add the word ‘English’ in Items 1, 2, 4, 6, 7, 8, 9, 10, 11, 12 and 16. This word was added to make sure that the respondents would focus only on the English reading comprehension. For instance, the statement in Item 2 (i.e., ‘my friends tend to avoid reading assignments’) was altered to ‘my friends tend to avoid English reading assignments’. Fifthly, based on the recommendations, the word ‘their’ was added in Items 2 and 6. For example, the statement in Item 6 (i.e., ‘I had close friend(s) whom I respected for reading achievement’) was changed to ‘I have close friend(s) whom I respect for their English reading achievements’. Likewise, in Items 7 and 10 two words were added (i.e., word ‘performing’ was added in Item 7 and a word ‘also’

was added in Item 10). Sixthly, one of the survey reviewers advised the researcher to change the past tense to the present tense for some of the items, including Items 4, 6, 12 and 17. For instance, Item 4 (i.e., ‘I felt nervous when I had problems understanding a passage’) was amended to ‘I feel nervous when I have problems understanding a passage in English’.

Seventhly, Item 7 was altered by changing the wording of the question in order to make the respondents understand better as they were EFL learners: ‘I was not good at reading comprehension activities in my previous academic life’ was changed to ‘I was not good at English reading comprehension activities in the school’. That is, ‘in the school’ was a much simpler phrase as compared to ‘in my previous academic life’. Eighthly, in Item 10, vagueness was spotted by the reviewers. To make it more lucid, a phrase was added: ‘I feel confident when other students in my class do well in reading’ was modified to ‘I feel confident about my own reading ability when other students in my class do well in reading in English’. Ninthly, indefinite articles ‘a’ and ‘an’ were added in Items 9, 11 and 12. Tenthly, in Item 6, two words were made plural by adding a letter ‘s’ (i.e., ‘I had close friend(s) whom I respected for reading achievement’) was altered to ‘I have close friends whom I respect for their English reading achievements’. Lastly, in Item 5, the word ‘good’ was changed to ‘satisfactory’ and also the word ‘school’ was deleted.

3.4.1.1.2.2 Modifications in Reading Self-efficacy Beliefs Questionnaire

Table 3.6 presents the detailed explanation of the modifications made in all the items of ‘Reading Self-efficacy Beliefs Questionnaire’.

Table 3.6

Items adapted in Reading Self-efficacy Beliefs Questionnaire

Item No.	Original Item	Revised Item	Explanation of Changes
1.	I can identify the parts of speech of the words in an English text.	I can identify the parts of speech (i.e., noun, pronoun, verb, adjective, preposition, conjunction, interjection) of the words in an English text.	All of the nine parts of speech were included in this item.
2.	I can understand the meaning of words in an English reading text.	I can understand the meaning of words in an English reading text.	No changes.
3.	I can guess the meaning of a word from its context in a reading text.	I can guess the meaning of a word from its context in an English reading text.	1. Word 'English' was added. 2. Article 'a' was substituted with 'an'.
4.	I can connect my real-life knowledge and text information.	I can connect my real-life knowledge and English text information.	Word 'English' was added.
5.	I can identify most of the denotations and connotations of a word in a text.	I can identify most of the denotations (i.e., dictionary meanings) and connotations (i.e., emotional associations) of a word in an English text. For example, the dictionary meaning (denotation) of <i>dove</i> is a bird whereas, in literature, its associated meaning (connotation) is peace.	Examples of both denotations and connotations were added.
6.	I can find the main idea of a reading text.	I can find the main idea in an English reading text.	1. Word 'English' was added. 2. Preposition 'of' was substituted with 'in'.
7.	I can understand the writer's purpose in a text.	I can understand the writer's purpose in an English text.	1. Word 'English' was added. 2. Article 'a' was substituted with 'an'.
8.	I can identify the type of reading passage.	I can identify the type of reading passage in English.	Word 'English' was added.
9.	I can understand the relationships between sentences in a text.	I can understand the relationships between sentences in an English text.	1. Word 'English' was added. 2. Article 'a' was substituted with 'an'.
10.	I can identify the correct spelling of English words in a text.	I can identify the correct spelling of words in an English text.	1. Article 'a' was substituted with 'an'. 2. Place of the word 'English' was changed.

All of the three survey reviewers were concerned about the scale used in the Reading Self-Efficacy Beliefs Questionnaire. The scale used in the original questionnaire was the 101-point scale ranging from 0 to 100. There was an interval of 10. For example, 0 to 10, 10 to 20 and it goes on till 100. Additionally, there were three options in the scale, i.e., ‘cannot do’, ‘moderately can do’ and ‘certainly can do’. Reviewers expressed their concerns regarding several aspects of the scale. Firstly, one of the reviewers claimed that it was not an interval scale due to the reason that the option ‘moderately can do’ seemed not to be the middle point in the scale. This raised suspicion concerning the validity of the original scale. Secondly, the reviewers advised the researcher to change the scale from the 101-point scale to the five-point Likert scale due to the reason that other two questionnaires used in the current study also employed the five-point Likert scale. Thus, they were of the opinion that it ought to be changed to the five-point Likert scale to avoid ambiguities while doing analysis. Based on the above recommendations, the researcher changed the scale to the five-point Likert scale having options from ‘strongly disagree’ to ‘strongly agree’ (see Appendix B).

Furthermore, the word, ‘English’ was added to the items 3, 6, 7, 8 and 9. It was done to narrow down the scope of the questions to only English reading self-efficacy beliefs. Additionally, Items 1 and 5 could be difficult for EFL learners to comprehend and it needed more elaboration. Therefore, they were modified accordingly. Item 1 (i.e., ‘I can identify the parts of speech of the words in an English text’) was altered to ‘I can identify the parts of speech (i.e., noun, pronoun, verb, adverb, adjective, preposition, conjunction, interjection) of the words in an English text’. Similarly, Item 5 (i.e., ‘I can identify most of

the denotations and connotations of a word in a text') was changed to 'I can identify most of the denotations (i.e., dictionary meanings) and connotations (i.e., emotional associations of a word in an English text. For example, the dictionary meaning (denotation) of *dove* is a bird, whereas, in literature, its associated meaning (connotation) is peace'. Examiners advised the researcher to include an example of denotation and connotation for the ease of EFL respondents. Moreover, in Item 6, a preposition 'of' was substituted by 'in'. Also, similar to the 'Questionnaire for Sources of Reading Self-efficacy', the font size of this questionnaire was changed from 10 to 12.

3.4.2 Reliability of the Quantitative Instrument

The valuation of the internal consistency level among numerous items of a construct is known as reliability of the instrument (Hair, Black, Babin, Andersen & Tatham, 2010). The reliability of an instrument also indicates that if it is used multiple times, it would generate the same results. Therefore, to check the internal consistency of the items, Cronbach's alpha coefficient method was employed in the pilot study.

The pilot study was conducted on 40 EFL community college students in Saudi Arabia. The lowest Cronbach's alpha value that is considered acceptable is 0.60 to 0.70 (Hair et al., 2010). The reliability test, operated by employing SPSS 23.0 for Windows, revealed that the standard of reliability for all the constructs was high, i.e., within the range of 0.727 to 0.838, as shown in Table 3.7.

Table 3.7

Reliability Test

Construct	Items	Reliability	Deleted Items
ME	4	0.761	NIL
VE	6	0.728	NIL
VP	4	0.727	NIL
PS	4	0.834	NIL
GL	13	0.838	NIL
PSS	8	0.830	NIL
SP	9	0.820	NIL
SEB	10	0.828	NIL
RC	1	N.A	NIL

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension; N.A= Not Applicable.

3.4.3 Key Findings of the Pilot Study

The findings regarding the hierarchical order of self-efficacy sources indicated that mastery experience was the most reported self-efficacy source whereas, physiological state was the least reported source. Furthermore, regarding the hierarchical order of metacognitive reading strategies, it was found that problem-solving reading strategies were the most reported strategies while support reading strategies were the least reported strategies. Moreover, it was revealed that the majority of the students had a higher reading self-efficacy level. Regarding the reading comprehension level, it was found that the majority of the respondents were above average readers. The findings of research question five revealed that three out of four self-efficacy sources were significantly and positively correlated with reading self-efficacy beliefs, whereas, physiological state showed a significant but negative relationship with reading self-efficacy beliefs. The results of research question six showed that all the three metacognitive reading strategies (i.e., global,

problem-solving, & support strategies) were significantly and positively correlated with reading self-efficacy beliefs. Moreover, the findings of research question seven showed a significant and positive relationship between reading self-efficacy beliefs and reading comprehension. Regarding mediation, it was found that reading self-efficacy beliefs mediated the relationship between all the self-efficacy sources/metacognitive reading strategies and reading comprehension of Saudi EFL community college students.

3.4.4 Loopholes Identified During the Pilot Study

During the pilot test of the current study, several loopholes were identified. Firstly, the learners were allotted a time of 20 minutes to fill in the questionnaires. It turned out that the learners asked for more time, as the allocated time was not enough. Thus, the researcher decided to increase the duration of time from 20 minutes to 30 minutes in the main data collection. Likewise, in the pilot study, the learners had to complete the reading comprehension test within 45 minutes. Yet again, the learners demanded for more time. Thus, the researcher increased the duration of time to one hour in the actual data collection. Thirdly, the researcher distributed the questionnaires and asked them to fill in the questionnaires. It was observed that learners seemed confused and asked questions regarding the meaning of some statements in the questionnaire. Hence, in the main data collection, before the administration of questionnaire, the learners were told the meaning of each statement clearly to avoid confusion.

3.5 Research Procedures of the Quantitative Data

The process of data collection is shown in Figure 3.3.

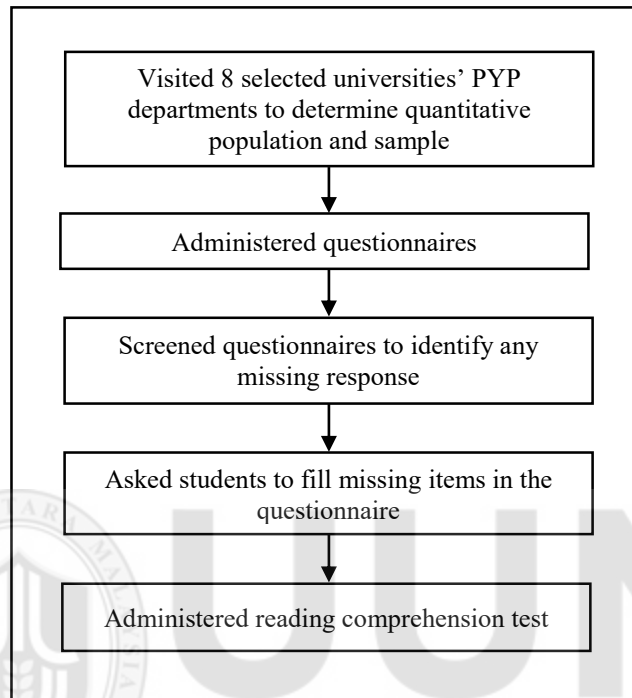


Figure 3.3. Flowchart of Quantitative Research Procedures Malaysia

Before starting the data collection in Saudi Arabia, the researcher collected the consent letter for data collection (refer to Appendix I) from Awang Had Salleh Graduate School (AHSGS). In this letter, the researcher was introduced and the intention behind the conduct of this research was stated. Hence, this letter proved extremely helpful to get support from the respondents. Data collection officially started in September, 2017. More precisely, the process of data collection was conducted within a time frame of 44 days, i.e., 15 September, 2017 to 29 October, 2017.

First of all, the researcher visited research sites, i.e., eight universities at the start of September, which was due to the reason that the new semester started in September. The first visit was critical because it allowed the researcher to get the lists of learners enrolled in Preparatory-Year-Programme (PYP) at eight universities. With the help of those lists, the population and sample size of the learners were finalised. The actual data collection process started during the second visit to the selected universities. It took one whole day to collect data from each of the eight universities. Quantitative data was collected by administering the questionnaire and a reading comprehension test. A pen with the UUM logo was provided to the respondents as a token of appreciation.

The researcher administered the questionnaire personally. The rationale of administering the questionnaires personally was to accomplish as many responses as possible. Sekaran and Bougie (2010) expressed that personally administered questionnaires aid the researcher to build rapport with the respondents while administering the questionnaire. Moreover, a researcher can explain the ambiguities to the respondents instantaneously, and response rate is elevated this way. In addition, questionnaires can be administered within a shorter period of time. The length of the questionnaire was eight pages including the cover page. The cover page lucidly drew the attention of the participants to the background and aim of the study. It also supplied guidelines regarding answering the questionnaire. Respondents were allowed to fill in the questionnaire within 30 minutes. Furthermore, their privacy and confidentiality were addressed to make them willing and comfortable to take part in the survey. The questionnaire instrument included three scales, i.e., 'questionnaire for sources of reading self-efficacy', 'reading self-efficacy beliefs questionnaire', and 'survey of

reading strategies' (SORS). The questionnaire was filled by the respondents individually. After administering the questionnaire, screening of the questionnaire was done by the researcher to make sure that all items were fully answered by the learners. Occasionally, some partially answered questionnaires were returned to the respondents in order to get their full response. It is worth mentioning that the required sample of the study was 351 respondents. However, to be on the safe side, the researcher distributed 565 questionnaires.

Subsequently, a reading comprehension test was administered by the researcher personally. It consisted of four reading passages extracted from the IELTS reading test. Each passage had five MCQs. The learners were given a time of one hour to complete the test. The reading comprehension test was attempted by the respondents individually.

3.6 Analysis of the Quantitative Data

Data analysis includes the process and statistical instruments with the help of which researchers evaluate their data, assess hypotheses and afterwards improve theories. In the current study, the researcher made use of descriptive and inferential statistics in order to analyse the data. Also, 'The Partial Least Squares Structural Equation Modelling' (PLS-SEM) method was employed to analyse the data. It is worth mentioning that it is necessary to prepare data before proceeding to analysis. Thus, several measures (i.e., analysis of missing values, analysis of outliers, normality test, and multicollinearity test) were taken to prepare the data for analysis.

3.6.1 Response Rate

The total number of questionnaires distributed was 565. Initially, the number of returned questionnaires was 427. After scrutinising the questionnaires in detail, 44 questionnaires were eliminated as they were incomplete and wrongly filled. Hence, analysis was run on 383 questionnaires. Consequently, after eliminating a few questionnaires, the response rate was found to be 67.7%, as shown in Table 3.8. The response rate above than 65% is considered acceptable in survey research (Gilbert, 1993; Kelley, Clark, Brown & Sitzia, 2003; Sitzia & Wood, 1998).

Table 3.8

Response Rate of the Questionnaires

Response	Freq/Rate
No. of distributed questionnaires	565
Returned questionnaires	427
Returned and usable questionnaire	383
Initial Response rate %	75.5%
Usable response rate %	67.7%

3.6.2 Initial Data Examination, Screening and Preparation

Before conducting a multivariate analysis, preparation, editing and screening of the data are considered as crucial steps. Also, performing data screening is of great importance due to the reason that it identifies any possible violation of the basic postulations regarding the application of multivariate methods (Hair Jr. et al., 2010). Additionally, initial examination of the data allows a researcher to acquire a greater and deeper insight into the collected data. Thus, missing data, outliers, normality and multicollinearity were examined and handled accordingly in the current study.

3.6.2.1 Analysis of Missing Data

Owing to the undesirable consequences of missing data in the analysis, precautionary measures were taken during the data collection phase to decrease their occurrence. After receiving the filled questionnaires, the researcher had a bird's eye view of all the questionnaires to ensure whether all the questions were answered properly. If any question was overlooked by the respondents intentionally or unintentionally, they were asked to fill in the incomplete questionnaire. Furthermore, if the percentage of missing values was less than 5% per item, they should be substituted by employing means (Hair Jr. et al., 2013). In the current study, after running the missing value analysis, it was found that nine items had missing values; which were not more than 5%, as shown in Appendices G and H. Therefore, by employing SPSS v23.0, missing values were substituted by using the series mean method in order to replace the missing values.

3.6.2.2 Analysis of outliers

An outlier can be defined as an extreme point that is far away as compared to other observations in the data. Outliers could occur due to alteration in the measurement and can probably display an experimental error (Churchill Jr. & Iacobucci, 2004). Outliers can appear in any randomly distributed data. They indicate that either there is an error in the measurement or the population is deteriorated with hard-tail distribution. Inspecting outliers is a crucial stage in the analysis for the reason that avoiding the initial inspection of outliers can mislead statistical tests if the outlier is problematic (Hair Jr. et al., 2010). Specifically, it falsifies statistics and may guide to such outcomes that do not generalise the whole sample except for the one having similar kind of outliers (Tabachnick & Fidell,

2013). In agreement with the recommendation of Tabachnick and Fidell (2013), in the current study, Mahalanobis D^2 method was used to detect and cope with multivariate outliers. It was found that there were no outliers in the current study.

3.6.2.3 Normality Test

After inspection of outliers, the data were analysed on the basis of normal distribution. The PLS-SEM is not a strict model. Hence, regarding the normality of distributions of the data, it does not have any assumptions (Hair Jr. et al., 2013; Henseler et al., 2009; Temme, Kreis, & Hildebrandt, 2010). In spite of the fact that the PLS-SEM is a non-parametric method of statistics and does not necessitate data to be normally distributed, it is essential to assess whether data is not too abnormal (Hair Jr. et al., 2013). If the data remains abnormal, it can cause hurdles in evaluating the parameters and also becomes the cause of inflation of standard errors from bootstrapping.

As stated by Hair Jr. et al. (2010), normality denotes the shape of data distribution for a particular variable and its association with the standard normal distribution for statistical methods. To assess the normality, i.e., evaluating probable deviance from shape of the distributions and normality, the current study employed a specific method of statistics called the method of Skewness and Kurtosis (Curran, West, & Finch, 1996; Hair Jr. et al., 2010; Kline, 2011; Tabachnick & Fidell, 2013; West, Finch, & Curran, 1995). However, Tabachnick and Fidell (2013) affirmed that if the sample of a study exceeds 200, no substantial difference in terms of deviance from the normality of Skewness and Kurtosis is observed in the analysis.

Table 3.9

Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
							Statistic	Std. Error	
ME	383	1.75	5.00	3.8907	.69005	-.520	.125	-.075	.249
VE	383	2.50	4.83	3.7769	.44759	-.671	.125	.488	.249
VP	383	1.00	5.00	3.5358	.85239	-.636	.125	.055	.249
PS	383	1.50	5.00	3.4794	.79426	-.708	.125	-.119	.249
GL	383	1.77	5.00	3.8402	.72514	-.610	.125	-.316	.249
PSS	383	1.13	5.00	3.5150	.68119	-.371	.125	-.168	.249
SP	383	1.89	5.00	3.4974	.54377	-.888	.125	.879	.249
SEB	383	1.90	5.00	3.6777	.69255	-.219	.125	-.588	.249
RC	383	1	5	3.80	1.054	-.679	.125	-.064	.249

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

The values of Skewness ought to be less than 2 and the values of Kurtosis ought to be less than 7 (Curran et al., 1996; West et al., 1995). Moreover, in agreement with the similar argument, Kline (2011) is of the perspective that if the Skewness absolute value exceeds 3 and the Kurtosis value exceeds 10, it may possibly be problematic for analysis. If these values exceed 20, it is an indication of a more critical problem. Based on the recommendations stated above, the Skewness and Kurtosis values of every item in the current study were within the satisfactory range of <2 and <7 , correspondingly, as shown in Table 3.9.

3.6.2.4 Multicollinearity

The correlation among two or more exogenous variables is known as multicollinearity (Hair Jr. et al., 2010). The problem of multicollinearity arises only when the degree of

correlation between independent variables is high (Hair Jr. et al., 2010; Pallant, 2010; Tabachnick & Fidell, 2013). Thus, when the degree of correlation between two or more variables is high, it suggests they include needless information. It also means that not all the variables are required in the analysis due to the reason that they increase the chances of error terms.

Moreover, the high degree of multicollinearity among different variables becomes the cause of inflation in the standard error of regression coefficient. Consequently, the reliability of the statistical significance of regression coefficients becomes low. To check the multicollinearity, there is a test which is considered most reliable, i.e., assessment of Variance Inflation Factor (VIF); the threshold of VIF should not be more than 10 (Hair Jr. et al., 2010; Pallant, 2010). In the current study, two methods were employed to evaluate multicollinearity. Firstly, multicollinearity was assessed by examining correlation matrix. Secondly, it was assessed by conducting a test of VIF on the independent variables.

To assess whether there is high degree of correlation between independent variables, the correlation matrix of these variables was analysed. Pallant (2010) asserts that if the correlation value between independent variables reaches 0.7 and higher, it indicates that multicollinearity exists between those variables. The findings of the correlation matrix in the current study indicated that not a single independent variable was highly correlated with other independent variables. Table 3.10 indicates that the values of the correlation are considerably less than the threshold of 0.7. Thus, it was determined that, regarding high correlation, no problems were found in the current study.

Table 3.10

Correlations among the Exogenous Variables

Variables	Nature of Relationship	ME	VE	VP	PS	GL	PSS	SP	SEB
ME	Pearson Correlation	1							.582**
	Sig. (2-tailed)								.000
	N	383							383
VE	Pearson Correlation	.387**	1						.459**
	Sig. (2-tailed)	.000							.000
	N	383	383						383
VP	Pearson Correlation	.277**	.107*	1					.136**
	Sig. (2-tailed)	.000	.035						.008
	N	383	383	383					383
PS	Pearson Correlation	.376**	.517**	.154**	1				.440**
	Sig. (2-tailed)	.000	.000	.003					.000
	N	383	383	383	383				383
GL	Pearson Correlation	.503**	.366**	.336**	.472**	1			.627**
	Sig. (2-tailed)	.000	.000	.000	.000				.000
	N	383	383	383	383	383			383
PSS	Pearson Correlation	.304**	.536**	.329**	.441**	.423**	1		.435**
	Sig. (2-tailed)	.000	.000	.000	.000	.000			.000
	N	383	383	383	383	383	383		383
SP	Pearson Correlation	.384**	.164**	.389**	.248**	.408**	.208**	1	.503**
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000		.000
	N	383	383	383	383	383	383	383	383
SEB	Pearson Correlation	.582**	.459**	.136**	.440**	.627**	.435**	.503**	1
	Sig. (2-tailed)	.000	.000	.008	.000	.000	.000	.000	
	N	383	383	383	383	383	383	383	383

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension. ** Correlation is significant at the 0.01 level (2-tailed), * Correlation is significant at the 0.05 level (2-tailed).

Secondly, the assessment of multicollinearity was done through the inspection of VIF by employing regression outcomes, delivered from the SPSS collinearity diagnostics result. As suggested, to check multicollinearity, this is the most reliable test (Hair Jr. et al., 2010). It is evident from Table 3.11 that the values of VIF are between 1.155 and 2.049, which are significantly lower than 10. In agreement with Hair Jr. et al. (2010) and Pallant (2010), the values of VIF higher than 10, signify high collinearity. The outcomes of this study indicate that no multicollinearity was found among independent variables.

Table 3.11

Variance Inflation Factor (VIF)

	RC	SEB
GL		1.944
ME		1.870
PS		1.555
PSS		1.672
RC		
SEB	1	
SP		2.049
VE		1.155
VP		1.831

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS= Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

Once the researcher collected the unrefined data from the research field, all the valid questionnaires were entered into Statistical Package for the Social Sciences (SPSS v23) after coding it. Thereafter, subsequent procedure of data evaluation was employed to evaluate the data. First of all, screening was done on the raw data to locate errors in data

entry; every variable was gone through a frequency test to detect and rectify the probable missing value by employing the corresponding mean values. Next, to detect the outliers, Mahalanobis D^2 method was employed. It was revealed that there were no outliers present in the data of the current study. Furthermore, normality of the data was evaluated by using a method of Skewness and Kurtosis. Results disclosed that data was normal and ready for further analysis. Additionally, multicollinearity was tested in order to prepare data for further analysis. In the present study, two methods were employed to test multicollinearity. Firstly, multicollinearity was evaluated by examining correlation matrix. Secondly, it was evaluated by conducting test of VIF of the independent variables. Findings indicated that no multicollinearity was found among independent variables. Next, to answer the first four research questions, frequency statistics, i.e., frequencies and percentages were employed. Finally, the researcher employed the PLS-SEM, which is considered as the second generation SEM. The rest of the quantitative research questions, i.e., fifth to ninth, were answered by using SEM. SEM plays a crucial role when there is a need to examine the cause and effect relationships among latent variables (Hair Jr., Ringle, & Sarstedt, 2011). In general, PLS-SEM is implemented for developing complicated multivariate analysis of relations among variables (Esposito Vinzi, Chin, Henseler, & Wang, 2010). The PLS-SEM method is not only a robust, outstanding and adaptable tool to build a statistical model but also deployed to test and predict a theory (Lowry & Gaskin, 2014; Ringle, Wande, & Becker, 2014; Robins, 2012). Also, Wan Afthanorhan (2013) emphasised that an authentic confirmatory factor analysis (CFA) could be attained effectively by employing PLS-SEM path modelling.

PLS-SEM is one of the statistical methods that have been employed by various researchers in numerous research fields in social sciences (Hair Jr., Sarstedt, Hopkins, & Kuppelwieser, 2014), such as management information system (Chin, Marcolin, & Newsted, 2003; Marcoulides, Chin, & Saunders, 2009), operations management (Peng & Lai, 2012), marketing (Hair Jr., Sarstedt, Ringle, & Mena, 2012; Henseler, Ringle, & Sinkovics, 2009; Reinartz, Krafft, & Hoyer, 2004), human resource (Becker, Klein, & Wetzels, 2012), and strategic management (Gudergan, Devinney, Richter, & Ellis, 2012; Hulland, 1999; Lew & Sinkovics, 2013). PLS-SEM is used vastly due to the reason that it allows to evaluate latent constructs and their relation with their respective items (outer model) and check the association between the latent constructs (inner model) (Hair Jr. et al., 2012; Henseler et al., 2009).

PLS-SEM has the ability to regulate non-normal data since it has non-rigid postulations regarding normality of variables' distribution (Henseler et al., 2009). Specifically, PLS-SEM guesstimates paths under restrictions of normality with larger samples and is more prone to identify variances between the groups as compared to the covariance-based SEM (CB-SEM) method (Marcoulides et al., 2009). Though the data is non-normal with a small sample size, the PLS-SEM approach appears to be more desirable. Even if the data is averagely non-normal, this method is subtle to sample data with non-normal distribution (Marcoulides & Saunders, 2006). Unlike CB-SEM, PLS-SEM tackles the issue of statistical power during analysis (Haenlein & Kaplan, 2011; Reinartz, Haenlein, & Henseler, 2009). Thus, considering the advantages of PLS-SEM, i.e., lower size of the

sample, non-normality of the data and the capability of prediction are additional benefits of using the PLS-SEM approach (Sarstedt, Ringle, & Hair, 2014).

Up to this point, the PLS-SEM approach has been exhibited as an exceptional model that has the capability to carry out estimations more effectively as compared to first generation and several other regression models of co-variance for evaluating mediation. Particularly, based on the viewpoints of the researchers for selecting an appropriate method for structural equation models' estimation, PLS-SEM was implemented in the current study due to the reason that the research model was a bit complex. This is in agreement with Haenlein and Kaplan (2004) and Hair Jr. et al. (2012) who claim that PLS-SEM is more appropriate to use when the research model of a study has more amount of exogenous constructs and a small amount of endogenous constructs.

In conclusion, the PLS-SEM has the capacity to cope with complicated models that contain a series of effects, i.e., moderation, mediation and other complicated relations (Lowry & Gaskin, 2014). Thus, the current study employed Smart-PLS v3.0 (Ringle et al., 2014) to establish the outer model (discriminant validity, convergent validity, and reliability) and the inner model (predictive relevance, significance of path coefficients, the effect size and coefficient determination). The detailed explanation regarding PLS-SEM procedures and results is stated in Section 4.5. The coming sub-section explains the rubrics employed in the current study to determine the levels of reading self-efficacy and reading comprehension.

3.6.3 Rubrics to Measure Reading Self-efficacy and Reading Comprehension

The third and fourth research objectives of the current study were to determine the levels of reading self-efficacy and reading comprehension of the Saudi EFL learners. In the previous literature, researchers used specific rubrics to determine the levels of aforementioned variables.

In order to determine the level of reading self-efficacy the current study adapted a rubric proposed by Usher (2009), in his study on mathematics self-efficacy. He divided the learners into two levels, i.e., high and low self-efficacy on the basis of median value. He used a six-point Likert scale. The learners whose mean score was higher than the median value (i.e., 3) were considered as high self-efficacious and vice versa. Thus, based on Usher's (2009) study, the researcher divided the reading self-efficacy level into two categories, i.e., high and low. Unlike Usher's (2009) study, the current study employed five-point Likert scale. So, the median value was 2.50 in the current study. Therefore, those learners whose mean score was higher than 2.51 were referred as high self-efficacious readers and vice versa, as shown in Table 3.12.

Table 3.12

Rubric to Assess Reading Self-efficacy Level (based on Usher, 2009)

Level of Reading Self-efficacy	Mean values
High Reading Self-efficacy	<2.51
Low Reading Self-efficacy	>2.50

Regarding the reading comprehension level, majority of the past studies determined the level of reading comprehension by using mean values (Alfangca & Tamah, 2017; Al

Ghraibeh, 2014; Murad Sani & Zain, 2011; Su & Wang, 2012; Yoğurtçu, 2012). However, in the current study, the participants' reading comprehension level was assessed on the basis of rubric adapted from Rawian (2012). Rawian (2012) divided the reading comprehension level into four categories, i.e. very poor, poor, average, and good. However, in the current study, the reading comprehension level was divided into five levels depending on the number of correct answers in the reading comprehension test, as shown in Table 3.13.

Table 3.13

Rubric to Assess the Reading Comprehension Level (based on Rawian, 2012)

Reading Comprehension Level	Scores on MCQs Test	Five-point Likert Scale Score
Good	17-20	5
Above Average	13-16	4
Average	9-12	3
Below Average	5-8	2
Poor	1-4	1

As mentioned above, the current study's IELTS reading comprehension test consisted of 20 MCQs. Thus, 20 MCQs were divided into five reading comprehension levels ('good', 'above average', 'average', 'below average', and 'poor'). Lastly, the researcher decided to convert the MCQs test scores into a five-point Likert scale. The rationale of this conversion was ease in doing analysis, as the rest of three instruments were also in the five-point Likert scale form. Thus, it was easy to tabulate responses in data sheet during the process of analysis.

Table 3.14 presents the summary of statistical analysis techniques employed to answer quantitative research questions.



Table 3.14

Summary of Statistical Analyses for the Quantitative Data

Research Questions	Description of Research Questions	Types of Variables	Scale of Measurement	Statistical Analysis
RQ 1	What is the hierarchical order of the four self-efficacy sources reported by Saudi EFL learners?	Independent Variable	Interval	Frequency Distribution
RQ 2	What is the hierarchical order of the usage of three metacognitive reading strategies reported by Saudi EFL learners?	Independent Variable	Interval	Frequency Distribution
RQ 3	What is the level (high/low) of reading self-efficacy beliefs among Saudi EFL learners?	Mediating Variable	Interval	Frequency Distribution
RQ 4	What is the level of reading comprehension of Saudi EFL learners?	Dependent Variable	N/A	N/A
RQ 5	To what extent are self-efficacy sources correlated to reading self-efficacy beliefs among Saudi EFL learners?	Independent Variable Mediating Variable	Interval	Correlation analysis
RQ 6	To what extent are metacognitive reading strategies correlated to reading self-efficacy beliefs among Saudi EFL learners?	Independent Variable Mediating Variable	Interval	Correlation analysis
RQ 7	To what extent are reading self-efficacy beliefs correlated to reading comprehension of Saudi EFL learners?	Mediating Variable Dependent Variable	Interval	Correlation analysis
RQ 8	To what extent do self-efficacy beliefs mediate the correlation between four self-efficacy sources and reading comprehension of Saudi EFL learners?	Independent Variable Mediating Variable Dependent Variable	Interval	Correlation analysis
RQ 9	To what extent do self-efficacy beliefs mediate the correlation between metacognitive reading strategies and reading comprehension of Saudi EFL learners?	Independent Variable Mediating Variable Dependent Variable	Interval	Correlation analysis

PART 2: QUALITATIVE PHASE

3.7 Qualitative Sampling

The qualitative research objective of the current research was to explore the Saudi EFL learners' perspectives regarding the impact of self-efficacy sources and metacognitive reading strategies on their reading comprehension. To achieve this objective, homogeneous purposeful sampling was used to select qualitative sample as suggested by Creswell (2002). Homogeneous purposeful sampling is appropriate for studies which are looking for participants having similar attributes (Creswell, 2002). He further suggests that a researcher needs to identify particular attributes that he/she is looking for in the target population. In context of the current research, the researcher looked for three main attributes, as shown in Table 3.15.

Table 3.15

Qualitative Sampling

Sr. no.	Name of the participant	Gender	Name of University	Name of Programme
1	S1	Male	Qassim university (Public)	PYP
2	S2	Male	King Saud University (Public)	PYP
3	S3	Male	Prince Sattam Bin AbdulAziz University (Public)	PYP
4	S4	Male	Majmaah University (Public)	PYP
5	S5	Male	Al-Imam Mohammed Ibn Saud Islamic University (Public)	PYP
6	S6	Male	Shaqra University (Public)	PYP

Firstly, the gender of the sample ought to be male. Secondly, the sample should be gathered only from public Saudi universities. Lastly, the sample should be gathered from PYP. As far as sample size is concerned, the researcher followed the guidelines suggested by Kuzel (1992). He suggested that a sample size of six to eight interviewees is appropriate for homogeneous sample, whereas for heterogeneous sample, the number of interviewees ought to be in the range of 12 to 20. Thus, six interviewees were selected due to the reason that the current study's sample was homogeneous in nature.

3.8 Qualitative Instrumentation

For the purpose of collecting qualitative data, semi-structured interviews were conducted. The qualitative instrument is explained in detail in the next sub-section.

3.8.1 Semi-structured Interviews

A collaborative discourse between the investigator and the respondent in order to acquire specific information is termed as an interview (Kajornboon, 2005). It is an instrument employed by researchers to acquire vital information that is helpful in answering research questions. A researcher can choose among diverse variety of interviews. There are three main types of interviews including, structured interviews, unstructured interviews, and semi-structured interviews. In the current study, semi-structured interviews were employed to gather qualitative data. In this type of interviews, generally, major questions or certain key topics are already selected before the start of interview, yet the possibility is there to ask questions other than the fixed ones depending upon the responses of the interviewee (Kajornboon, 2005). Semi-structured interviews are better to use when the researcher needs

to acquire a certain degree of accuracy. In this data collection method, the interviewer and the interviewee are allowed to involve in formal discourse and interviews. A list of questions is already prepared to guarantee the scope of research area, consequently, the researcher is confined within the research area during interviews (Harris & Brown, 2010). This kind of data collection method is preferred by majority of the researchers due to the fact that it is generally pursued to enhance the researcher's observations; therefore, the researcher can achieve a deep insight of the research topic (Harris & Brown, 2010).

The researcher developed the interview questions with the help of his supervisors (refer to Appendix E). The major rationale of developing the interview protocol, rather than adopting/adapting it was due to the nature of the current study. The qualitative part of current study aimed to explore the factors behind the influence of self-efficacy sources and metacognitive reading strategies on reading comprehension of the Saudi EFL learners. Numerous past studies have been conducted on self-efficacy sources and metacognitive reading strategies that have collected the data by using interviews (Lin, Fong & Wang, 2017; Williams, 2017; Bryant, 2017; Zuo & Wang, 2016; Usher, 2009). However, none of them were congruent to current study's research objective. Therefore, the researcher decided to develop the interview protocol. There were seven major questions in an interview protocol, as shown in Appendix E. Furthermore, there were several sub-questions in each major question. For instance, each source of self-efficacy consisted of two sub-questions. Moreover, each one of global, problem-solving, and support strategies consisted of four sub-questions. The details of the interview questions are explained in Table 3.16.

Table 3.16

Development of Interview Protocol

Sr. No.	Variable	Interview Question	Explanation of the Question
1.	Mastery Experience	a) How does your personal successful experience regarding reading affect your current reading comprehension performance? b) How does your personal unsuccessful personal experience regarding reading affect your current reading comprehension performance?	Regarding mastery experience, two interview questions were asked due to the reason that Social Cognitive Theory (SCT) affirmed that both positive and negative mastery experience can affect performance.
2.	Vicarious Experience	a) How does someone's good performance in reading affect your reading comprehension performance? b) How does someone's poor performance in reading affect your reading comprehension performance?	Regarding vicarious experience, two interview questions were asked due to the reason that Social Cognitive Theory (SCT) affirmed that both positive and negative vicarious experience can affect performance.
3.	Verbal Persuasion	a) How do positive feedback or comments from teachers, parents or fellow students affect your reading comprehension? b) How do negative feedback or comments from teachers, parents or fellow students affect your reading comprehension?	Regarding verbal persuasion, two interview questions were asked due to the reason that Social Cognitive Theory (SCT) affirmed that both positive and negative verbal persuasion can affect performance.
4.	Physiological State	a) How often do you feel nervous or tired when reading a text? Why do you feel so? b) How does nervousness or tiredness affect your reading comprehension?	Unlike other self-efficacy sources, physiological state has no positive or negative state. However, regarding it, two question were asked due to two reasons. Firstly, the researcher wanted to know about the frequency and kind of nervousness. Secondly, the researcher wanted to explore the factors behind the influence of physiological state on reading comprehension.
5.	Global Reading Strategies	a) How does having a purpose while reading help you comprehend the text better? b) How does using past knowledge while reading help you comprehend the text better? c) How does skimming the text while reading help you comprehend the text better? d) How does guessing while reading help you comprehend the text better?	The questionnaire (i.e., SORS) used to collect quantitative data regarding metacognitive reading strategies consists of 13 items related to global strategies. Out of 13 strategies, the researcher randomly selected 4 strategies to be included in interview protocol. Only 4 strategies were selected due to the reason that it was unfeasible to include all the 13 strategies.

Table 3.16 (Continued)

Development of Interview Protocol

Sr. No.	Variable	Interview Question	Explanation of the Question
6.	Problem-solving Reading Strategies	a) How does reading the text slowly help you comprehend the text better? b) How does rereading the text help you understand the text better? c) How does visualization help you understand the text better? d) How does guessing the meaning of unknown words help you understand the text better?	The questionnaire (i.e., SORS) used to collect quantitative data regarding metacognitive reading strategies consists of 8 items related to global strategies. Out of 8 strategies, the researcher randomly selected 4 strategies to be included in interview protocol. Only 4 strategies were selected due to the rationale that it was impractical to add in all the 8 strategies.
7.	Support Reading Strategies	a) How does taking notes while reading help you understand the text better? b) How do reference materials help you understand an English text better? c) How does underlining the text help you understand an English text better? d) How does translating the text from English to Arabic help you understand an English text better?	The questionnaire (i.e., SORS) used to collect quantitative data regarding metacognitive reading strategies consists of 9 items related to global strategies. Out of 9 strategies, the researcher randomly selected 4 strategies to be included in interview protocol. Only 4 strategies were selected due to the rationale that it was impractical to add in all the 9 strategies.

3.9 Pilot Test of the Qualitative Instrument

In the current study, the researcher conducted a pilot interview session with a Saudi EFL learner, studying in a Preparatory-Year-Programme (PYP) of Qassim University. The interview session lasted for 15 minutes. Van Teijlingen and Hundley (2001) asserted that the findings of the qualitative pilot study can be included in the main study. Therefore, an interview conducted for the pilot study was included in the findings of the main study. The following section states the preliminary findings of pilot study.

3.9.1 Preliminary Findings of Pilot Study

The respondent shared various factors regarding the role of self-efficacy sources/metacognitive reading strategies in his reading comprehension. Regarding the first self-efficacy source, i.e., mastery experience, he shared that the usage of reading strategies improved his reading comprehension. He also stated that one of the major difficulties in comprehending the text was his poor vocabulary knowledge. Regarding the second self-efficacy source, i.e., vicarious experience, it was found that the respondent revealed two factors that improve his reading comprehension including ‘gaining motivation from peers’ and ‘competitive environment among peers’. Moreover, the findings of the third self-efficacy source, i.e., verbal persuasion indicated that the factor responsible for improving his reading comprehension was ‘getting confidence from positive feedback from his teacher related to his reading comprehension skills’. Lastly, regarding the last self-efficacy source, i.e., physiological state, it was found that ‘lack of time to comprehend the text’ was the major factor that deteriorates his reading comprehension.

Additionally, the respondent shared various factors regarding the role of metacognitive reading strategies in his reading comprehension. Regarding the first type of metacognitive reading strategies, i.e., global reading strategies, the factors that improved his reading comprehension include 'reading for enjoyment', 'using past knowledge from real life incidents', 'using skimming technique to read quickly', and 'predict content of coming paragraphs'. Moreover, regarding second type of metacognitive reading strategies, i.e., problem-solving reading strategies, the factors that improved his reading comprehension include 'read slowly for better understanding of the text', 'rereading for better understanding', 'visualise while reading' and 'guessing meaning of unknown words'. Lastly, the findings of the third type of metacognitive reading strategies, i.e., support strategies indicated that the factors responsible for improving his reading comprehension include 'usage of notes-taking strategy to refer back to notes later', 'notes-taking in native language (Arabic)', 'underlining important content to refer back to it later', and 'translating from English to Arabic while reading'.

3.10 Trustworthiness of the Qualitative Instrument

In qualitative research, rigorousness or validity is assessed in a different way as compared to quantitative research. Quantitative research is evaluated by employing certain statistical procedures. On the contrary, the assessment of qualitative research is done by trustworthiness and authenticity (Flyvbjerg, 2006; Lincoln and Guba, 1990; Shenton, 2004). The proponents of the positivist paradigm question the issue of authenticity and trustworthiness, as the procedures used to address the reliability and validity in quantitative research are different than qualitative research (Flyvbjerg, 2006; Shenton, 2004).

Trustworthiness is addressed by means of a researcher's reflexivity (i.e., researcher's acknowledgment regarding biases), employment of a suitable methodology, selection of a suitable instrument, and the procedures of data collection (Flyvbjerg, 2006; Fossey et al., 2002; Winter, 2000). For the purpose of assessment of trustworthiness, four criteria need to be considered by qualitative researchers, including credibility, conformability, dependability and transferability (Guba, 1981). These four criteria are explained in the following sub-sections.

3.10.1 Credibility

The quantitative researchers consider 'internal validity' as one of the major benchmarks to validate their data. It denotes whether the instrument is measuring what it is intended to measure. On the other hand, the corresponding concept for the qualitative researchers is 'credibility' which copes with the question, 'how consistent are the outcomes with reality'? (Merriam, 1998). One of the most crucial aspects in establishing trustworthiness is ensuring credibility (Lincoln & Guba, 1985). Shenton (2004) recommended that following prearrangements need to be made to ensure credibility:

a) To ensure credibility, the researcher should adopt well-established methods to analyse the data. In other words, the researcher needs to adopt such methods for data analysis that have been already employed in the past studies. In the current study, in order to analyse the qualitative data, thematic analysis was used based on the method proposed by Graneheim and Lundman (2004).

b) The researcher ought to develop familiarity with the research site and respondents before the collection of qualitative data (Lincoln & Guba, 1985; Erlandson, Harris, Skipper, & Allen, 1993). In the current study, the researcher visited the research site several times before the qualitative data collection. For instance, the researcher made the first visit to the eight Saudi universities in order to know about the population of the study. The researcher made the second visit to collect quantitative data. After those two visits, the researcher was well acquainted with the research site and respondents of the study. Subsequently, in the third visit, the researcher collected the qualitative data by conducting interviews with the respondents.

c) The researchers should address triangulation in terms of respondents and research sites to obtain a rich and diverse data. In the current study, qualitative data was collected from six respondents in order to get a rich picture of the data. Moreover, all of the six respondents were chosen from six different universities.

d) In order to elicit authentic data from respondents, the researchers ought to use several techniques. For instance, in the current study, all the participants were asked straightforwardly whether they were willing to participate in the study (Shenton, 2004). Data was collected from them after their approval. Furthermore, the researcher made it clear to all the participants that they had a complete right to withdraw from the current study at any point (Shenton, 2004).

e) The researcher ought to ask questions iteratively if he/she is not getting the required answer from the respondent (Shenton, 2004). In the current study, the researcher asked several probing questions (see Appendix L) in order to gather required data.

f) The researcher should organise frequent debriefing sessions with his or her superiors in order to get guidance and also to widen the scope of useful ideas that can be helpful in further collection of the data (Shenton, 2004). In the current study, the researcher remained in contact with his supervisors in order to get constant evaluation and feedback during the collection and analysis of the data.

g) The researcher of the current study asked his peers to scrutinise his research project in order to get varied viewpoints (Shenton, 2004).

h) The researcher should constantly make use of 'reflective commentary' (Shenton, 2004). In the current study, the researcher reflected upon the emerging patterns after every interview session. It allowed the researcher to know about the effectiveness of the techniques been employed in the collection of the data (Shenton, 2004).

i) Guba and Lincoln (1985) affirmed that 'member checks' is one of the most important aspects to evaluate the credibility of the data. The basic purpose of 'member checks' is to assure that the data provided by the participants is congruent to what they actually intended to provide (Shenton, 2004). In the current study, after the collection of qualitative data, the researcher transcribed the recorded interviews. The transcribed interviews were shown to

the respondents for the purpose of validation. Once they were satisfied, a validation form was signed by them (see Appendix K).

j) The researcher should compare his/her study's findings with the previous similar studies' findings. Silverman (1993) affirmed that to evaluate one's qualitative work, it is absolutely necessary to compare one's study results with other studies. In the current study, the researcher compared and discussed the current findings with other studies' findings in Section 4.8.

3.10.2 Transferability

The term 'transferability' is the corresponding term for 'external validity', which denotes the degree to which the results of a study can be applied to other settings (Shenton, 2004). Shenton (2004) believed that in quantitative research, the findings can be generalised to a broader population due to the reason that quantitative sample consists of large number of respondents. On the other hand, in qualitative research, generalising the findings to other settings and populations could be dubious due to its small sample size (Shenton, 2004). However, Bassey (1981) suggested that qualitative researchers can associate the qualitative findings with their own research if they believe that their research situation is congruent with the other qualitative findings. Lincoln and Guba (1985) and Firestone (1993) stressed that the qualitative researchers ought to provide enough information related to the context of their study so that the other researchers can apply the findings to their research settings. According to Shenton (2004), the information on the subsequent concerns should be explicitly stated in the research:

a) The researcher should clearly mention the location and number of the organisations included in the study. In the current study, the researcher clearly stated the names and location of all the eight Saudi government universities.

b) The researcher should explicitly state the restrictions regarding the type of respondents. For instance, the sample of the current study was restricted to only Saudi PYP learners.

c) The number of participants involved in the study ought to be stated. In the current study, qualitative data was gathered from six respondents.

d) The methods employed for the purpose of data collection ought to be stated clearly. In the current study, the researcher collected the data by using semi-structured interviews.

e) The researcher should mention the number and length of the sessions involved in collecting the data. In the current study, six interview sessions were conducted and the average length of each interview session was 15 to 20 minutes.

f) The researcher should tell the readers explicitly about the length of the time period over which data was gathered. In the current study, qualitative data was gathered within ten days, i.e., 1 November, 2017 to 10 November, 2017.

3.10.3 Dependability

To tackle the dependability concern more explicitly, the qualitative researchers ought to give a detailed description of the processes involved in the study, thus allowing the other researchers to replicate the work. Therefore, the other researchers may view the research design of the study as a ‘prototype model’ (Shenton, 2004). Hence, according to Shenton (2004), in order to facilitate the other researchers to develop a meticulous understanding of the processes and their usefulness, the qualitative researchers ought to incorporate sections addressing the following areas:

- a) The researcher should explain the research design in greater detail and also explain how it is implemented in the study. In the current study, the explanation and implementation of a research design were described in greater detail (refer to Section 3.1).
- b) The researcher should explain data collection procedures in detail. In the current study, the minutiae of data collection processes of qualitative data were explicated thoroughly in Section 3.11.

3.10.4 Confirmability

Confirmability tests the quality of the collected data and whether its source can be validated. It assists to certify that the findings of the research are the genuine outcome of the perceptions of the respondents, rather than the opinions of the researcher (Guba & Lincoln, 1989). It can be addressed by employing triangulation. In the current study, the researcher employed triangulation in terms of research participants and research sites. For

instance, qualitative data was collected from six Saudi EFL learners (participants) and all of them were studying in different universities (research sites) (Shenton, 2004). Additionally, the issues related to confirmability could be addressed via researchers' reflexivity, i.e., the researchers acknowledge their own biases in the study (Miles & Huberman, 1994).

3.11 Research Procedures of the Qualitative Data

The research procedures involved in collection of qualitative data are shown in Figure 3.4. The process of qualitative data collection was conducted within a time frame of 10 days, i.e., 1 November, 2017 to 10 November, 2017. First of all, a consent form was signed by the interviewees before conducting the interviews (Appendix J). Semi-structured interviews were conducted with six learners. The average length of interviews was approximately 15 to 20 minutes. All the interviews were recorded by using a tape recorder. Subsequently, the researcher listened to audio recordings of interviews carefully and typed the transcripts in 'MS Word'. Next, the typed transcripts were given back to the respective interviewees to confirm whether the transcripts matched with their actual responses. Afterwards, the transcripts were rectified by taking the remarks of the interviewees into consideration. After the satisfaction of interviewees regarding the rectified transcripts, a validation form was signed by them as a token of their consent regarding rectified transcripts (Appendix K). The prepared transcripts of the interviews were evaluated and explored (Appendix L).

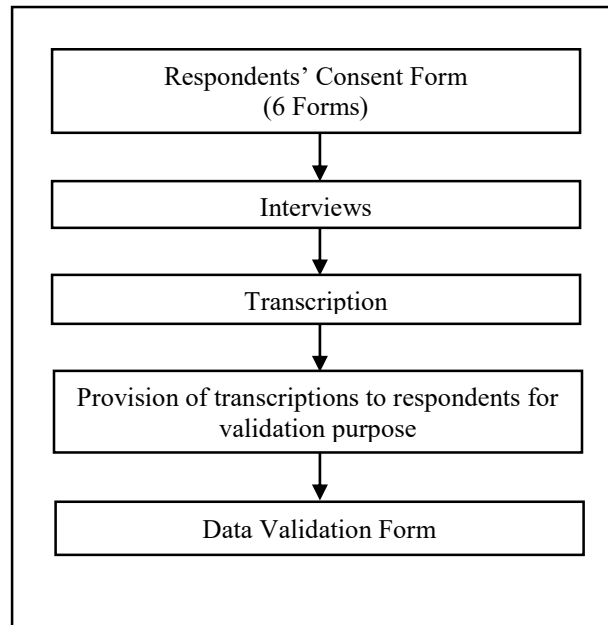


Figure 3.4. Flowchart of Qualitative Research Procedures

Consequently, the collected data was proceeded for analysis process. The next section explains the process of data analysis.

3.12 Analysis of the Qualitative Data

The current study employed a thematic analysis approach to analyse the collected data from the semi-structured interview protocol. The procedure of thematic analysis offered a meticulous structure in order to analyse the data (Kairuz, Crump & O'Brien, 2007). Thematic analysis employing an inductive method was a blend of both reflection and interaction (Kairuz et al., 2007). This method allowed the researcher to evaluate the outcomes and discover the viewpoints that appeared from the findings, resulting in development of summary of findings gathered from the data (Kairuz et al., 2007). The aim of an inductive approach was to assist the understanding of complicated unprocessed data

via formation of data sets and themes, a conception that Thomas (2003) termed as ‘data reduction’. The outcomes of the interview protocol were a blending of the impartial objectives of the researcher and what was shaped from analysis of the interview findings. The method proposed by Thomas (2003) required rigorous reading of the data. Thereafter, the researcher formed categories from the raw data and those categories were compressed into main categories or themes.

The method employed for analysing the qualitative data by the current study was adapted from Graneheim and Lundman (2004). The method proposed by them was basically an extension of Thomas’s (2003) method. They have extended his method to add in stricter definitions regarding the procedure of data coding to extract the categories of data into themes. They indicated four vital steps to extract themes from the data. In the first step, the researcher needs to get involved in the data, in which one needs to read the transcript again and again to detect substantial strands. These particular strands of data were designated as meaning entities. The second step included extraction of meaning entities into plain and uncomplicated words or ideas – it was designated by Thomas (2003) as ‘data reduction’, whereas, Graneheim and Lundman (2004) designated it as ‘condensed meaning units’. The third step included deduction of condensed meaning entities into advanced logical levels (Graneheim & Lundman, 2004). The primary phase was defined as a ‘code’ which acted as a ‘label’ assigned to identify the condensed meaning entity (Thomas, 2003). The final step contained additional classification of the data codes (Graneheim & Lundman, 2004). Codes were arranged on the basis of cohesion in order to generate subcategories, categories and ultimately themes (Thomas, 2003). A category was basically a description of the

subject matter and was thus expression of the apparent subject matter of the data (Bogdan & Biklen, 2007).

In the current study, first of all, interviews were manually transcribed on notebook and subsequently typed on 'Microsoft Word'. Thereafter, transcribed data was reviewed by the researcher to certify that both the audio recordings and written interviews were congruent. The current study strictly followed the rules and regulations recommended by Bogdan and Biklen (2007) and Bazeley (2013) in preparing the transcripts from recorded interviews. Firstly, it was suggested that a heading should appear at the very beginning of every interview since it aided the organisation of the text and recovered particular fragments of information when required (Bazeley, 2013). The heading of the interview comprised of following information - individual being interviewed, the exact time the interview took place, the location of the interview, and any additional information that could be helpful for the researcher to recall the subject matter of an interview (Bazeley, 2013). Headings are especially useful for those studies that consist of numerous participants and those in which more than one interview is conducted (Bogdan & Biklen, 2007). The titles must consist of keywords which indicate the content present in the interview (Bogdan & Biklen, 2007).

Secondly, the transcript ought to add in all 'mmms', 'umm', recurrences and the like (Bogdan & Biklen, 2007). Recurrences convey something regarding thoughts or sentiments of the respondents (Bazeley, 2013). Repetitive refusal might imply the opposite viewpoint of what the interviewee initially appears to be saying (Kvale, 1996). 'Mmms' might denote

reluctance or any other concern about the subject under discussion, even though these recurrences were merely a frequently uttered speech's pattern, the final result might be different (Bogdan & Biklen, 2007). Thirdly, imperfect utterances or poor grammar ought not to be rectified (which denoted the way respondents conveyed the message); it is essential to acquire the real pattern and form of the interviewee's expression (Kvale, 1996). Fourthly, occurrences that produce disruptions during the interview session, for instance; tape off, door knock, or any other inappropriate disruption ought to be noted (Bogdan & Biklen, 2007). Fifthly, nonverbal and sentimental components of the discourse, for example; short and long silence gaps and laughter ought to be noted (Bazeley, 2013). Sentimental tone and rhetoric's usage are vital to be noted (Bogdan & Biklen, 2007).

Sixthly, state in the document with regard to where noteworthy ideas are situated in the original source (Bogdan & Biklen, 2007). This action would assist connecting straight from the document to the voice recorded in the file. Seventhly, while typing a transcript, a new line should be started whenever there is a shift of turn of interviewer and interviewee, stating the person, i.e. interviewer or interviewee on the left side (Bazeley, 2013). The transcript ought to be analogous to the interview recording (Kvale, 1996). The questions and remarks of the interviewer ought to be incorporated (Bazeley, 2013). Lastly, when a person speaks for a long span of time, the speech ought to be fragmented into several paragraphs to assist coding (Bogdan & Biklen, 2007). Additionally, the space on the left side of the page ought to be reserved for the purpose of remarks and coding (Bogdan & Biklen, 2007).

Afterwards, the researcher read the interview transcripts over and over again. After reading the transcripts thoroughly, the researcher was able to identify large and significant strands of data. Subsequently, these large strands of data were condensed into rather small units. Thereafter, small units consisting of raw data gathered with the help of in-depth interviews were allotted various codes. More specifically, the data were allotted situation codes and activity codes as shown in Table 3.17. According to Bogdan and Biklen (2007), situation codes are components of data that let the researcher know, how the respondents described the setting or specific topics. In the current study, the situation codes were allotted to those components of data that explained how the interviewees described and understood the process of reading comprehension, and also their perceived thoughts regarding self-efficacy sources and metacognitive reading strategies. The situation codes indicated components of data that showed how and why self-efficacy sources and metacognitive reading strategies were vital and significant to the interviewees. In contrast, activity codes were related to frequently occurring activities and these activities could be comparatively informal (Bogdan & Biklen, 2007). In the current study, activity codes were allotted to those components of data that explained the interviewees' frequently occurring activities regarding self-efficacy sources, usage of metacognitive reading strategies and reading comprehension.

Table 3.17

Sample Schema to Code and Organise Data according to the Themes

Example excerpts (student)	Analyses (Note/Comment)	Categories and Themes
My teachers tell me like, “Good job, you are the best” or something like this....it boosts my reading confidence 200% and improve my reading performance. (S4) [Situation Code]	The student felt good after receiving positive comments from his teacher regarding his reading performance. Furthermore, positive comments were responsible for elevating his confidence level as well his reading comprehension performance.	Verbal Persuasion: Getting confidence
I take notes only if something important comes across me. It helps me to remember different words or concepts. For example, when I can use these notes when I am in the car and traffic gets jammed. So, I could have a look at these notes and it could save a lot of time. (S3) [Activity Code]	The student used one of the support reading strategies, i.e. taking notes. It helps him in saving time and absorbing important information within a short span of time.	Support Reading Strategies: Taking notes
I remember in high school, there was a teacher of English and he has worked a lot on my reading skills. He used to pay special attention on me regarding reading skills and vocabulary. He built a strong reading skills foundation and due to that I got selected in this Preparatory Year Programme. (S5) [Situation Code]	The student stated about his old experience when his teacher helped him to improve his reading skills and also he mentioned about his accomplishment of getting selected in a university programme.	Mastery Experience: Role of a teacher
I read very [Stress] slowly. I read every single word because this is going to help me to choose the good answer in reading comprehension MCQs. If I read it quickly, maybe I would skip some words or wouldn't understand some words and it would be tough this way. So, for that reason, I read every single word. I try to understand everything. (S4) [Activity Code]	Reading the text slowly greatly helped the student as it increased his focus and it allowed him to concentrate on every single word.	Problem-solving Reading Strategies: Reading slowly

Lastly, situation and activity codes gave way to categories and consequently themes. In spite of the fact that categories could be distributed into several minor categories, data ought to be fit into just one patent category (Kairuz, Crump & O'Brien, 2007). In the current study, data were divided into two major categories (self-efficacy sources and metacognitive reading strategies). Furthermore, seven minor categories were made. Four of them (mastery

experience, vicarious experience, verbal persuasion, physiological state) were related to first major category (self-efficacy source), whereas, three of them (global strategies, problem-solving strategies, support strategies) were related to second major category (metacognitive reading strategies). After the extraction of manifold meanings from the categories, themes were developed; there was a strand of meaning that could befall in varying domains (Bogdan & Biklen, 2007). Kairuz et al. (2007) defined theme as a manifestation of the covert subject matter of the text. The text was examined to detect parts of text regarding particular issues known as ‘content areas’ which were analogous to the ‘meaning units’ of inductive method (Thomas, 2003). In the current study, several themes were extracted from seven aforementioned minor categories. Refer to Section 4.7 to see themes of all the seven categories.

3.13 Ethical Considerations

According to Caruth (2013), the ethical concerns related to quantitative and qualitative research designs are applicable to a mixed-methods research design as it is a blend of both research designs. Thus, it is obligatory for a researcher who conducts a mixed-methods research to get approval from related authorities, to keep away from creating disturbances on the research site, to maintain the privacy and secrecy of the respondents, to tell the purpose and objective of the study truthfully, to respect and acknowledge the respondents, to avoid deceitful practices, and to respond patiently to the concerns of the respondents. Ponce and Maldonado (2015) highlight the importance of addressing related bodies before executing the study. It is vital for a researcher to go along with accurate procedures and to abide by all the obligations of the research area where they aim to carry out a study. The

researcher of the current study considered the above-mentioned considerations during the process of data collection.

3.14 Summary

This chapter has started with the explanation of research design. After that, justifications regarding the adoption of a mixed-methods research approach were presented. Thereafter, the chapter was segregated into phases (i.e., quantitative and qualitative phase). Firstly, quantitative phase was explained in which a whole section was designated to the process of sampling, including population, sampling frame, sampling technique, and sample size. Furthermore, the instruments used for quantitative data collection were explained thoroughly. The pilot study, reliability and validity of the selected quantitative instruments were stated. Additionally, quantitative research procedures were described with the help of a flow chart. Also, a detailed explanation of the processes involved in the analysis of the quantitative data was presented. Thereafter, the second phase (i.e., qualitative phase) started consisting of qualitative sampling, data collection tool, pilot test, trustworthiness of instrument, research procedures and analysis of the qualitative data. Lastly, ethical issues involved in mixed-methods research were discussed.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.0 Introduction

The major aim of the current chapter is to present research findings. The current chapter offers findings on the basis of data gathered from Saudi EFL learners of eight government universities. More specifically, the current chapter consists of subsequent sections, as shown in Figure 4.1. The chapter is divided into two parts (i.e., quantitative and qualitative data). The first part presents the findings and discussion of the quantitative data. The second part presents the findings and discussion of the qualitative data.

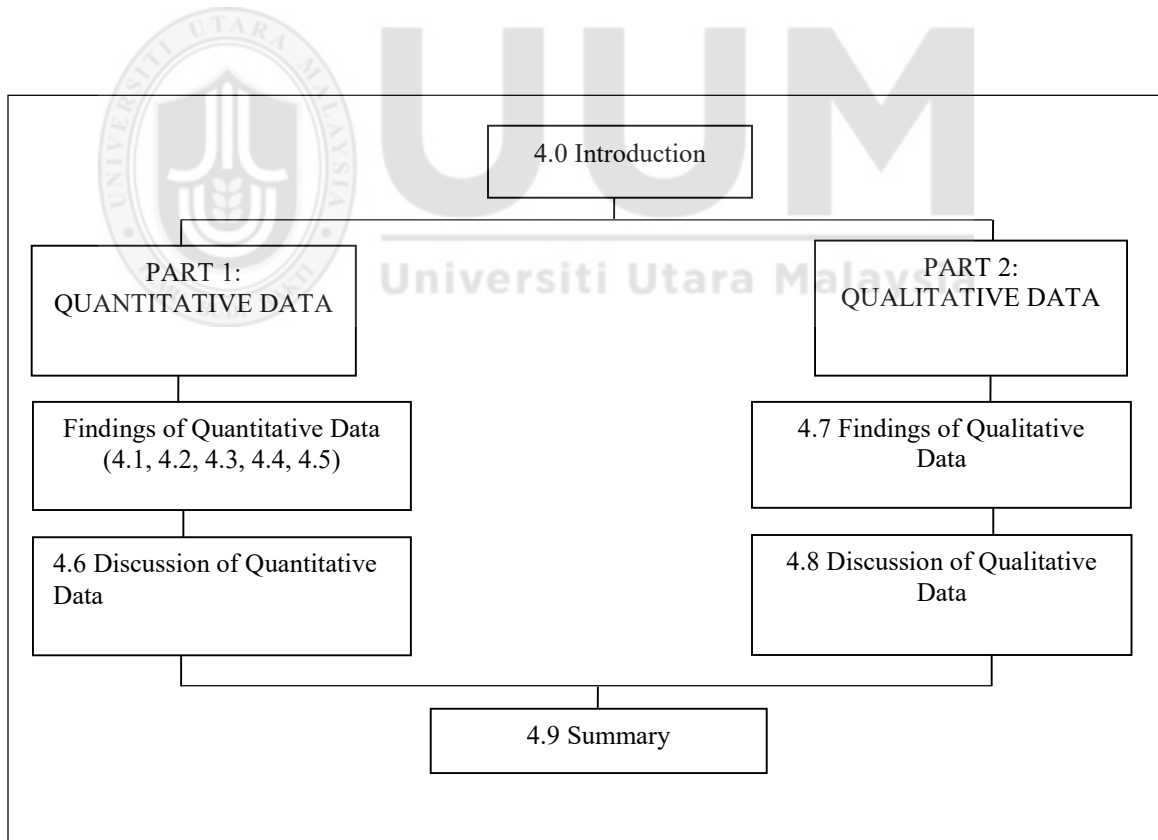


Figure 4.1. The Organisation of Chapter Four

PART 1: QUANTITATIVE DATA

4.1 Findings of Research Question One (Hierarchical Order of Self-efficacy Sources)

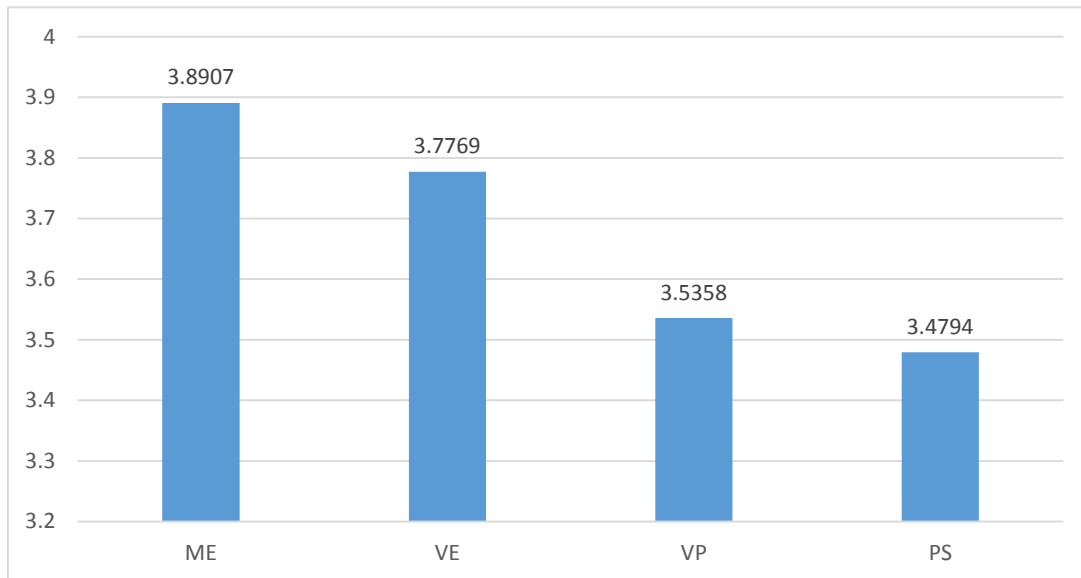
The first research objective of the current study was to identify the hierarchical order of four self-efficacy sources reported by the Saudi EFL learners. To achieve this objective, a statistical software, SPSS 23.0 was used. The researcher employed the option of mean values to determine the presence of specific self-efficacy sources among learners. The mean values of four self-efficacy sources are illustrated in Figure 4.2 and summarised in Table 4.1. The findings revealed mastery experience (ME) as the most reported source by the Saudi EFL learners with a mean value of 3.89. Vicarious experience (VE) was the second most reported self-efficacy source with a mean value of 3.77. It was also found that verbal persuasion (VP) was ranked as the third most-reported source with a mean value of 3.53. Lastly, physiological state (PS) was ranked fourth and the least reported self-efficacy source with a mean value of 3.47.

Table 4.1

Descriptive Statistics of Self-efficacy Sources

Self-efficacy Sources	N	Mean	SD
Mastery Experience (ME)	383	3.89	0.69
Vicarious Experience (VE)	383	3.77	0.67
Verbal Persuasion (VP)	383	3.53	0.85
Physiological State (PS)	383	3.47	0.95

Note. N= Number of responses; SD= Standard Deviation.

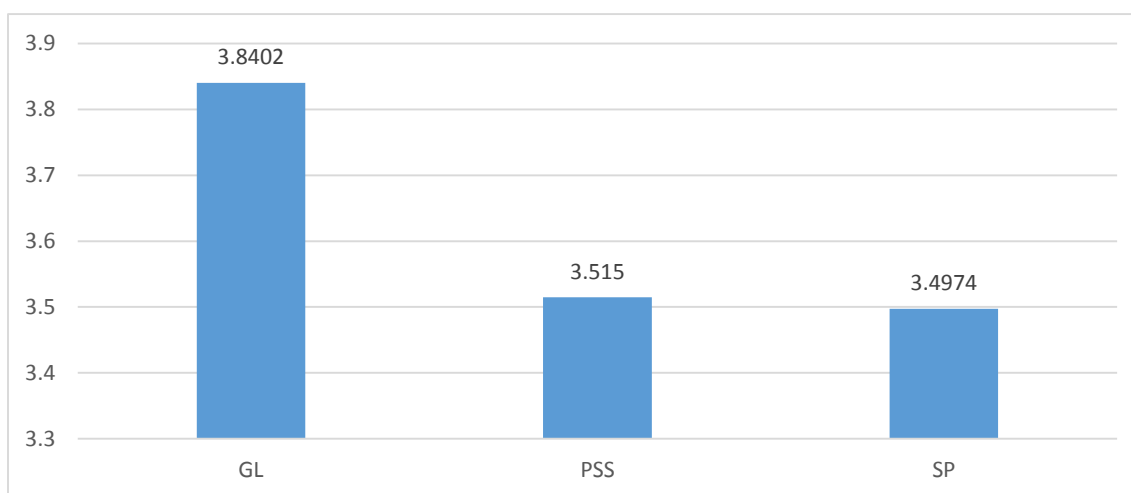


Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State.

Figure 4.2. Hierarchical Order of Self-efficacy Sources

4.2 Findings of Research Question Two (Hierarchical Order of Metacognitive Reading Strategies)

The second research objective was to identify the hierarchical order of the usage of three metacognitive reading strategies by Saudi EFL learners. The researcher used the same technique to deal with this research objective as used for the previous objective. The mean values of the three metacognitive reading strategies are visualised in Figure 4.3 and summarised in Table 4.2. It was revealed that the learners reported ‘global strategies’ (GL) as the most used metacognitive strategies with a mean value of 3.840. Similarly, ‘problem-solving strategies’ (PSS) was reported to be the second most frequently used strategies by the Saudi EFL learners with a mean value of 3.515. Lastly, ‘support strategies’ (SP) was reported to be the least used strategies with a mean value of 3.497.



Note. GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies.

Figure 4.3. Hierarchical Order of Metacognitive Reading Strategies

Table 4.2

Descriptive Statistics of Metacognitive Reading Strategies

Metacognitive Reading Strategies	N	Mean	SD
Global Strategies (GL)	383	3.8402	0.72
Problem-solving Strategies (PSS)	383	3.515	0.68
Support Strategies (SP)	383	3.4974	0.93

Note. N= Number of responses; SD= Standard Deviation.

4.3 Findings of Research Question Three (Level of Self-Efficacy Beliefs)

The third research objective of the current research was to identify the level (high/low) of reading self-efficacy beliefs among Saudi EFL learners. To accomplish this objective, a vital feature of SPSS, i.e., frequency statistics (frequencies and percentages) was employed for the identification of the level of reading self-efficacy beliefs of the Saudi EFL learners. As shown in Figure 4.4, 235 (61.4%) learners reported that they were high self-efficacious

readers. On the other hand, 148 (38.6%) learners indicated that they were low self-efficacious readers.

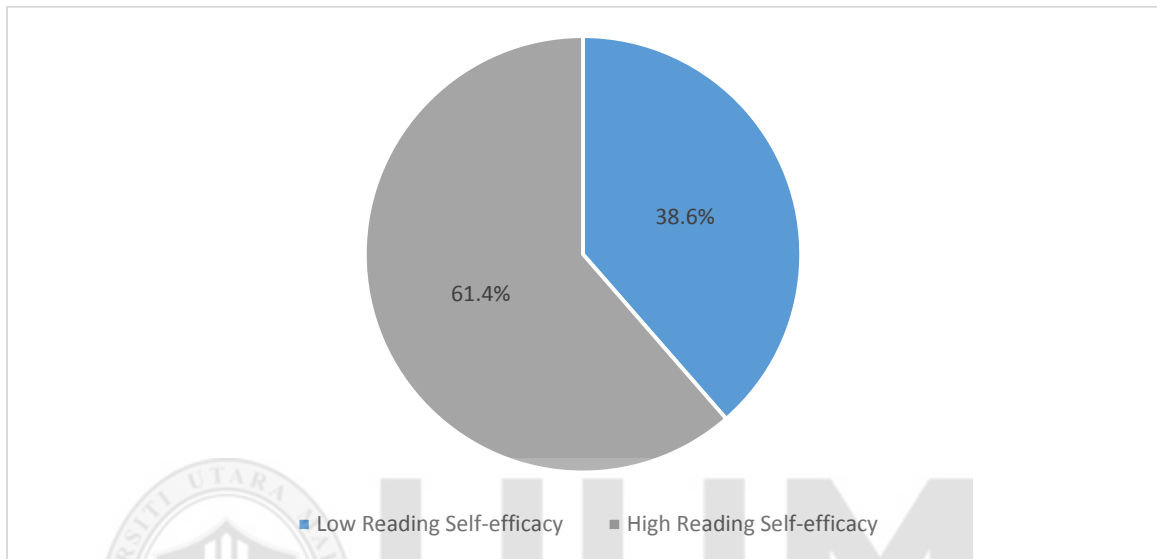


Figure 4.4. Level of Reading Self-efficacy Beliefs

4.4 Findings of Research Question Four (Level of Reading Comprehension)

The fourth objective of the current research was to identify the reading comprehension level of the Saudi EFL learners. In order to achieve this objective, the researcher used frequency statistics (frequencies and percentages) via SPSS 23.0 as shown in Figure 4.5. It was found that 92 (24.0%) learners were ‘good readers’. Furthermore, 183 (47.8%) learners fall in the category of ‘above average’ readers. Moreover, 76 (19.8%) learners were ‘average readers’. A small number of learners, i.e., 9 (2.4%) learners were ‘below average readers’. Lastly, 23 (6%) learners rated themselves as ‘poor readers’.

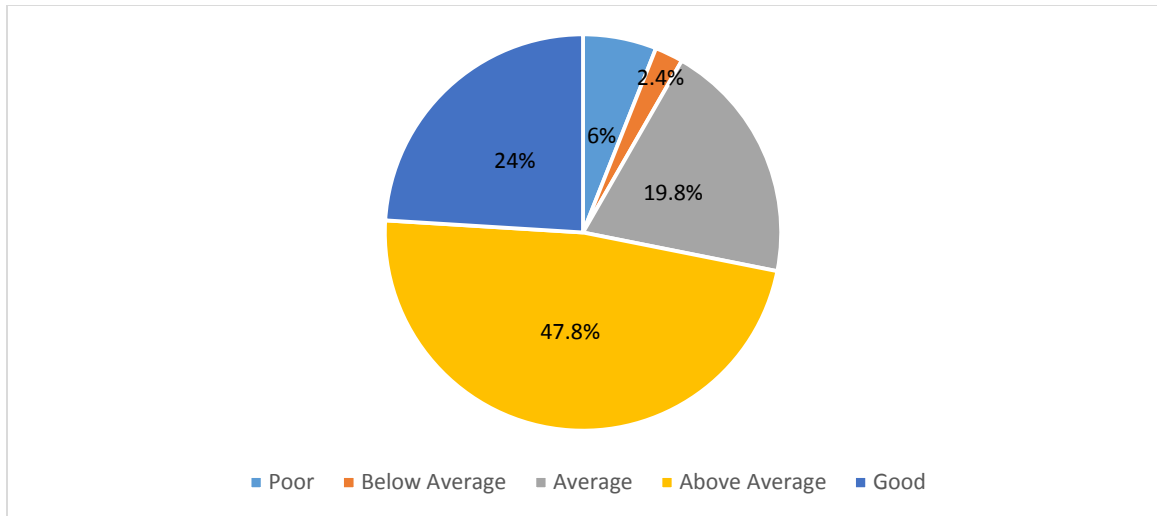


Figure 4.5. Reading Comprehension Level

The findings of Research Questions Five to Nine are presented in the following sections.

4.5 Evaluation of PLS-SEM Results

In this section, the outcomes of factor analysis are presented. As stated in Chapter Three, all the scales along with their items were adapted from past studies. The current study assesses the validity and reliability of the variable measures. Firstly, the validity and reliability of the measures of the variables was confirmed. Then, structural models were examined and the relationships between the variables were assessed as well.

The next step after examining and screening of the data was to evaluate the outer and the inner model respectively (Esposito Vinzi et al., 2010; Hair Jr. et al., 2013). To assess the outer (measurement model) and the inner model (structural model), PLS-SEM was employed in the current study. To be more specific, PLS-SEM was employed to assess the direct as well as mediating outcomes of the current study. SmartPLS 3.0 by Ringle et al.

(2014) was employed to establish the connecting links between the variables in the theoretical models.

Before performing the PLS-SEM analysis, it was necessary to organise the model to ease understanding. To successfully organise the model, indicators ought to be clarified primarily, so that it could be established which indicators are reflective and which are formative. The configuration of the model at the first hand is crucial due to the reason that the approach employed to analyse the formative measurement model is not the same as compared to the approach used in the reflective measurement model (Hair Jr. et al., 2013; Lowry & Gaskin, 2014). In the current study, the nature of indicators of all the latent variables was reflective.

Particularly, the indicator (observed) constructs and the latent (unobserved) constructs were reflective in nature instead of formative. Furthermore, no-second-order variables, i.e., having two levels of elements, were present in the analysis of this study. More specifically, the study variables in the inner-model were handled as first-order variables. As far as the arrangement and the relationship among the variables is concerned, this study had eight exogenous latent variables including seven independent variables: mastery experience, vicarious experience, verbal persuasion, physiological state, problem-solving strategies, global strategies, and support strategies (ME, VE, VP, PS, PSS, GL, SP), and one mediating variable, reading self-efficacy beliefs (SEB). In addition, there were two endogenous variables in the current study, including mediating variable, SEB and a dependent variable, reading comprehension (RC).

4.5.1 The Measurement Model

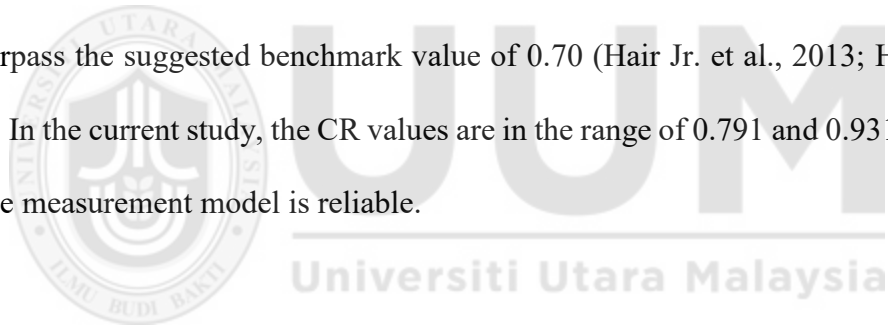
The initial step in the analysis of the PLS-SEM was the evaluation of the measurement model (outer model) (refer to Figure 4.6). The measurement model copes with the measurement of the component, which establishes how appropriately the indicators load theoretically and correlate with particular variables. To put it in another way, the analysis of the measurement model verifies that the items of the questionnaire measure what they are supposed to measure, hence certifying that the items are legitimate and reliable.

Validity and reliability are the two key benchmarks employed in the analysis of PLS-SEM to assess the measurement model (Hair Jr. et al., 2013; Hulland, 1999; Ramayah, Lee, & In, 2011). The decision about the nature of the association between variables (the structural model) hinges on the validity and reliability of the measures. The appropriateness of the measurement model can be evaluated by examining: (1) reliabilities of every single item, i.e., internal consistency reliability and indicator reliability by employing composite reliability (CR); (2) convergent validity of the instruments related to individual variables by employing average variance extracted (AVE); and (3) discriminant validity by employing the 'Fornell-Larcker principle', 'Hetrotrait-Monotrait' (HTMT), and the indicator's outer loadings.

To start with, internal consistency generally calculates the consistency of the outcome among items of the same test. It evaluates whether the respective items evaluating the variable are generating similar scores (Hair Jr. et al., 2013). Thus, in the current study, internal consistency reliability was evaluated by inspecting CR.

As claimed by Hair Jr. et al. (2013), dissimilar to Cronbach's alpha, CR does not consider an equal item loading of a variable. The value of CR fluctuates between 0 and 1; the benchmark value should be more than 0.60 (Henseler et al., 2009). However, if the value reaches 0.70 and greater, it is considered most appropriate (Hair Jr. et al., 2012). Correspondingly, the value of the CR in the middle of 0.6 and 0.7 suggests average internal consistency; however, it is deemed to be more satisfactory if it ranges between 0.70 and 0.90 (Nunnally & Bernstein, 1994).

Hence, in the current study, Cronbach's alpha and CR values of all the variables were assessed, and the findings in Table 4.3 indicate that all the values of Cronbach's alpha and CR surpass the suggested benchmark value of 0.70 (Hair Jr. et al., 2013; Henseler et al., 2009). In the current study, the CR values are in the range of 0.791 and 0.931, representing that the measurement model is reliable.



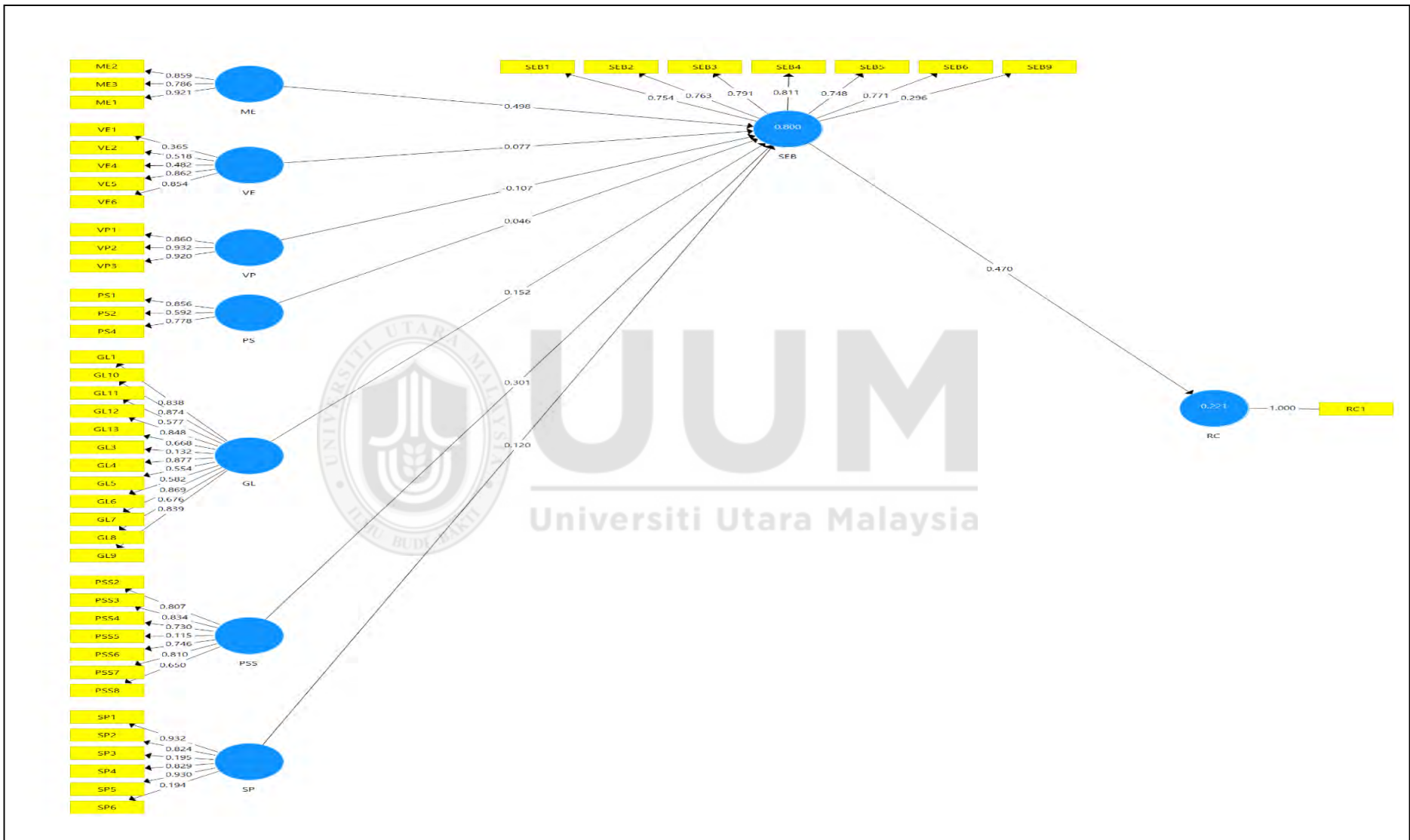


Figure 4.6. Measurement Model

The next thing to examine was convergent validity. It denotes the degree to which the items of the same variables that are theoretically associated to each other are actually correlated (Henseler et al., 2009). Therefore, it indicates the extent of correlation between the measures of the same variable (Hair Jr. et al., 2013). Regarding the identification of component of convergence in the measurements of the variable, AVE was employed with a benchmark value of 0.50 and greater (Hair Jr. et al., 2012; Henseler et al., 2009).

The convergent validity of a variable is considered satisfactory if AVE value reaches 0.50. To put it in another way, latent variables are responsible for half of the variance of their items and show satisfactory convergent validity (Hair Jr. et al., 2013). In the current study, the assessment of the convergent validity was done by inspecting AVE values. Findings in Table 4.3 indicate that the value of AVE of all the variables surpass the benchmark value of 0.50 (Hair Jr. et al., 2012; Henseler et al., 2009). The findings indicate that the range of AVE values is between 0.504 and 0.819. Hence, it can be resolved that the convergent validity of variables is determined.

Table 4.3

Loadings, Reliability and Convergent Validity Values

Variable Name	Items	Loadings	AVE	CR	Alpha
Global Strategies	GL1	0.838	0.526	0.924	0.906
	GL10	0.874			
	GL11	0.577			
	GL12	0.848			
	GL13	0.668			
	GL3	0.132			
	GL4	0.877			
	GL5	0.554			
	GL6	0.582			
	GL7	0.869			
	GL8	0.676			
GL9	0.839				
Mastery Experience	ME1	0.921	0.736	0.893	0.818
	ME2	0.859			
	ME3	0.786			
Physiological state	PS1	0.856	0.563	0.791	0.619
	PS2	0.592			
	PS4	0.778			
Problem-solving Strategies	PSS2	0.807	0.504	0.864	0.808
	PSS3	0.834			
	PSS4	0.730			
	PSS5	0.115			
	PSS6	0.746			
	PSS7	0.810			
	PSS8	0.650			
Support Strategies	SP1		0.529	0.844	0.801
		0.932			
	SP2	0.824			
	SP3	0.195			

Table 4.3 (Continued)

Loadings, Reliability and Convergent Validity Values

Variable Name	Items	Loadings	AVE	CR	Alpha
	SP4	0.829			
	SP5	0.930			
	SP6	0.194			
Reading Self-efficacy		0.754	0.525	0.88	0.837
Beliefs	SEB1				
	SEB2	0.763			
	SEB3	0.791			
	SEB4	0.811			
	SEB5	0.748			
	SEB6	0.771			
	SEB9	0.296			
Vicarious Experience	VE1	0.365	0.593	0.81	0.646
	VE2	0.518			
	VE4	0.482			
	VE5	0.862			
	VE6	0.854			
Verbal Persuasion	VP1	0.860	0.819	0.931	0.889
	VP2	0.932			
	VP3	0.920			

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS= Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; AVE= Average Variance Extracted; CR= Composite Reliability.

Next, discriminant validity was established, which copes with the degree to which one variable is in fact dissimilar to another variable. To put it in another way, the measures of the variables which are not associated to one another theoretically are actually not associated to one another (Churchill, 1979; Hair Jr. et al., 2013). In the present study, three criteria were employed to determine discriminant validity, i.e., the Fornell-Larcker

criterion, the HTMT criterion, and the evaluation of the outer loadings. The Fornell-Larcker criterion is considered as the most traditional method in examining the discriminant validity (Hair Jr. et al., 2013).

In the 'Fornell-Larcker method', discriminant validity is determined when the value of the square root of AVE of every variable is greater than the variable's highest association with another latent variable (Hair Jr. et al., 2013; Henseler et al., 2009). Thus, in the current study, the assessment of discriminant validity was done by making a comparison of the square root of the AVE for every variable with the correlations depicted in the correlation matrix. Table 4.4 demonstrates the findings of the 'Fornell-Larcker method' evaluation with the variables' square root. The square root value of AVE is demonstrated in the table in the bold text. It can be observed that square root value of AVE is higher as compared to its highest variable's correlation with any other variable. Therefore, it is resolved that the discriminant validity of the variable has been determined (Hair Jr. et al., 2013; Henseler et al., 2009).

Also, a new method, 'Heterotrait-Monotrait' (HTMT) was introduced by Henseler, Ringle, and Sarstedt (2015) to determine the discriminant validity of the variance-based structure modelling. According to this approach, the ratio of HTMT ought to be lower than 0.85. Table 4.5 indicates that the HTMT values of all the variables are lower than aforementioned benchmark. Thus, discriminant validity is determined.

Table 4.4

Fornell-Larcker Method

	GL	ME	PS	PSS	RC	SEB	SP	VE	VP
GL	0.725								
ME	0.576	0.858							
PS	0.5	0.442	0.75						
PSS	0.514	0.465	0.495	0.71					
RC	0.383	0.387	0.329	0.492	1				
SEB	0.664	0.794	0.547	0.695	0.47	0.725			
SP	0.534	0.545	0.387	0.414	0.395	0.572	0.727		
VE	0.123	0.168	0.237	0.305	0.214	0.298	0.093	0.77	
VP	0.452	0.498	0.263	0.313	0.258	0.412	0.631	-0.037	0.905

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

Table 4.5

Heterotrait-Monotrait (HTMT)

	GL	ME	PS	PSS	RC	SEB	SP	VE	VP
GL									
ME	0.679								
PS	0.645	0.599							
PSS	0.616	0.549	0.675						
RC	0.414	0.421	0.418	0.555					
SEB	0.753	0.882	0.716	0.833	0.501				
SP	0.612	0.63	0.49	0.494	0.414	0.602			
VE	0.195	0.238	0.367	0.42	0.268	0.402	0.145		
VP	0.547	0.575	0.328	0.371	0.274	0.462	0.674	0.191	

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

Finally, in the current study, outer factor loadings were assessed due to the reason that they are considered as a vital benchmark in evaluating the contribution that an indicator variable is making towards an allocated variable. The assessment of outer loadings was based on the benchmark value of 0.50 and greater (Hair Jr. et al., 2010). However, Hair Jr. et al. (2013) claim that if the value of outer loading becomes higher than 0.40 but lower than 0.70, this value ought to be analysed cautiously and ought to be removed only if it inflates the AVE and CR value. Keeping in view these suggestions concerning deletion of the items, 13 items were removed out of 58 items. As the recommended benchmark value of outer loading is 0.50 and greater, thus, Table 4.6 demonstrates that all the bold values of outer loading surpass the recommended benchmark. Therefore, it is established that all the indicator variables are displaying adequate contribution towards allocated variable. In addition, as claimed by Hair Jr. et al. (2013), the assessment of discriminant validity can be done by evaluating the outer loadings of the indicator. They claim that the establishment of discriminant validity is possible when the outer loading of an indicator on a variable is greater than its total cross-loadings with other variables. Therefore, Table 4.6 reveals that no discriminant validity problem was found due to the reason that loadings are higher than 0.5, and none of the variables has loading greater than the one it intends to measure.

It is worth-mentioning that 15 out of 58 items have been deleted after the assessment of structural model; however, no single variable was excluded since all the variables contained adequate number of items (Hair, Sarstedt, Pieper, & Ringle, 2012). After getting a suitable outcome of the assessment of the measurement model (outer model), specifically

the latent constructs show adequate proof of validity and reliability, the subsequent stage was the assessment of structural model (inner model).

Table 4.6

Factor Loading and Cross Loading

	GL	ME	PS	PSS	RC	SEB	SP	VE	VP
GL1	0.838	0.467	0.405	0.355	0.282	0.542	0.331	0.127	0.175
GL10	0.874	0.44	0.392	0.448	0.305	0.601	0.339	0.125	0.219
GL11	0.577	0.403	0.321	0.384	0.235	0.358	0.428	-0.009	0.556
GL12	0.848	0.437	0.401	0.357	0.273	0.505	0.295	0.173	0.149
GL13	0.668	0.473	0.392	0.444	0.348	0.517	0.644	0.063	0.623
GL4	0.877	0.443	0.397	0.454	0.308	0.606	0.343	0.124	0.222
GL5	0.554	0.312	0.327	0.302	0.243	0.34	0.434	-0.007	0.576
GL6	0.582	0.4	0.323	0.386	0.231	0.358	0.441	-0.008	0.57
GL7	0.869	0.435	0.394	0.355	0.269	0.507	0.299	0.153	0.167
GL8	0.676	0.485	0.397	0.456	0.358	0.533	0.656	0.072	0.626
GL9	0.839	0.463	0.39	0.355	0.292	0.545	0.326	0.12	0.177
ME2	0.53	0.859	0.327	0.414	0.386	0.644	0.504	0.117	0.512
ME3	0.383	0.786	0.412	0.323	0.172	0.626	0.358	0.194	0.247
ME1	0.558	0.921	0.399	0.452	0.42	0.762	0.53	0.127	0.506
PS1	0.47	0.382	0.856	0.501	0.326	0.502	0.412	0.213	0.3
PS2	0.213	0.212	0.592	0.289	0.235	0.239	0.184	0.174	0.103
PS4	0.387	0.367	0.778	0.297	0.182	0.433	0.233	0.153	0.146
PSS2	0.408	0.436	0.36	0.807	0.326	0.647	0.425	0.232	0.302
PSS3	0.4	0.316	0.356	0.834	0.453	0.495	0.278	0.295	0.221
PSS4	0.383	0.315	0.385	0.730	0.426	0.461	0.325	0.199	0.321
PSS6	0.363	0.428	0.38	0.746	0.313	0.551	0.317	0.222	0.213
PSS7	0.358	0.283	0.323	0.810	0.426	0.469	0.237	0.252	0.194
PSS8	0.429	0.322	0.458	0.650	0.336	0.514	0.277	0.214	0.165
RC1	0.383	0.387	0.329	0.492	1	0.47	0.395	0.214	0.258
SEB1	0.574	0.371	0.492	0.68	0.348	0.754	0.365	0.248	0.231
SEB2	0.508	0.677	0.295	0.48	0.419	0.763	0.519	0.32	0.385
SEB3	0.487	0.417	0.506	0.608	0.382	0.791	0.418	0.263	0.248
SEB4	0.563	0.428	0.49	0.666	0.405	0.811	0.4	0.257	0.245
SEB5	0.463	0.844	0.386	0.393	0.279	0.748	0.475	0.146	0.372

Table 4.6 (Continued)

Factor Loading and Cross Loading

	GL	ME	PS	PSS	RC	SEB	SP	VE	VP
SEB6	0.485	0.865	0.404	0.426	0.37	0.771	0.486	0.156	0.405
SEB9	0.222	0.245	0.127	0.232	0.075	0.296	0.08	0.093	0.101
SP1	0.49	0.516	0.333	0.391	0.377	0.53	0.932	0.066	0.604
SP2	0.48	0.447	0.364	0.385	0.343	0.504	0.824	0.123	0.483
SP4	0.454	0.445	0.308	0.355	0.312	0.485	0.829	0.082	0.557
SP5	0.468	0.498	0.349	0.367	0.349	0.503	0.930	0.071	0.579
VE1	0.096	0.129	0.135	0.186	0.157	0.182	0.114	0.365	0.087
VE2	0.095	0.136	0.231	0.276	0.184	0.284	0.034	0.518	-0.175
VE4	0.097	0.126	0.165	0.23	0.153	0.207	0.089	0.482	0.069
VE5	0.438	0.420	0.477	0.573	0.268	0.535	0.336	0.862	0.281
VE6	0.405	0.468	0.445	0.498	0.271	0.511	0.290	0.854	0.318
VP1	0.387	0.408	0.231	0.254	0.236	0.341	0.546	-0.115	0.860
VP2	0.422	0.497	0.239	0.3	0.237	0.406	0.599	0.015	0.932
VP3	0.416	0.441	0.244	0.294	0.229	0.367	0.565	-0.011	0.920

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

4.5.2 The Structural Model

As stated previously, as soon as the measurement model was assessed and the validity and reliability of the model were determined, the subsequent step was to assess the structural model outcomes. This included analysing the structural model's abilities of prediction and the relationships among the variables. Furthermore, the evaluation of structural model was also carried out after determining the relationships among variables. Hair Jr. et al. (2013) claim that the major conditions to evaluate the structural model in PLS-SEM are the significance of the effect size (f^2), path coefficients, predictive relevance (Q^2) and coefficient determination (R^2).

4.5.2.1 Direct Relationships (Findings of Research Questions Five, Six and Seven)

In the current study, to deliver a comprehensive picture of the findings and to investigate research hypotheses 1 to 8 clearly, an organised analysis of the structural model was performed. The assessment of the structural model initiated with an evaluation of the relationships among independent variables and mediating variable. The size of the path coefficients was evaluated by employing the 'PLS-SEM algorithm'. Additionally, the significance of the relationship was evaluated by using the 'PLS-SEM bootstrapping' method in the SmartPLS 3.0. The real number of cases was employed as number of cases, and the bootstrapping sample was 5,000 (Hair Jr., Ringle, & Sarstedt, 2011; Hair Jr., et al., 2012; Hair Jr. et al., 2013; Henseler et al., 2009).

In the very first model, attention was given to the analysis of the relationship between independent variables and mediating variable (H1 to H7). Furthermore, it also involved the relationship between mediating variable and dependent variable (H8). However, the second model involved the mediation analysis, where H9 to H15 were evaluated.

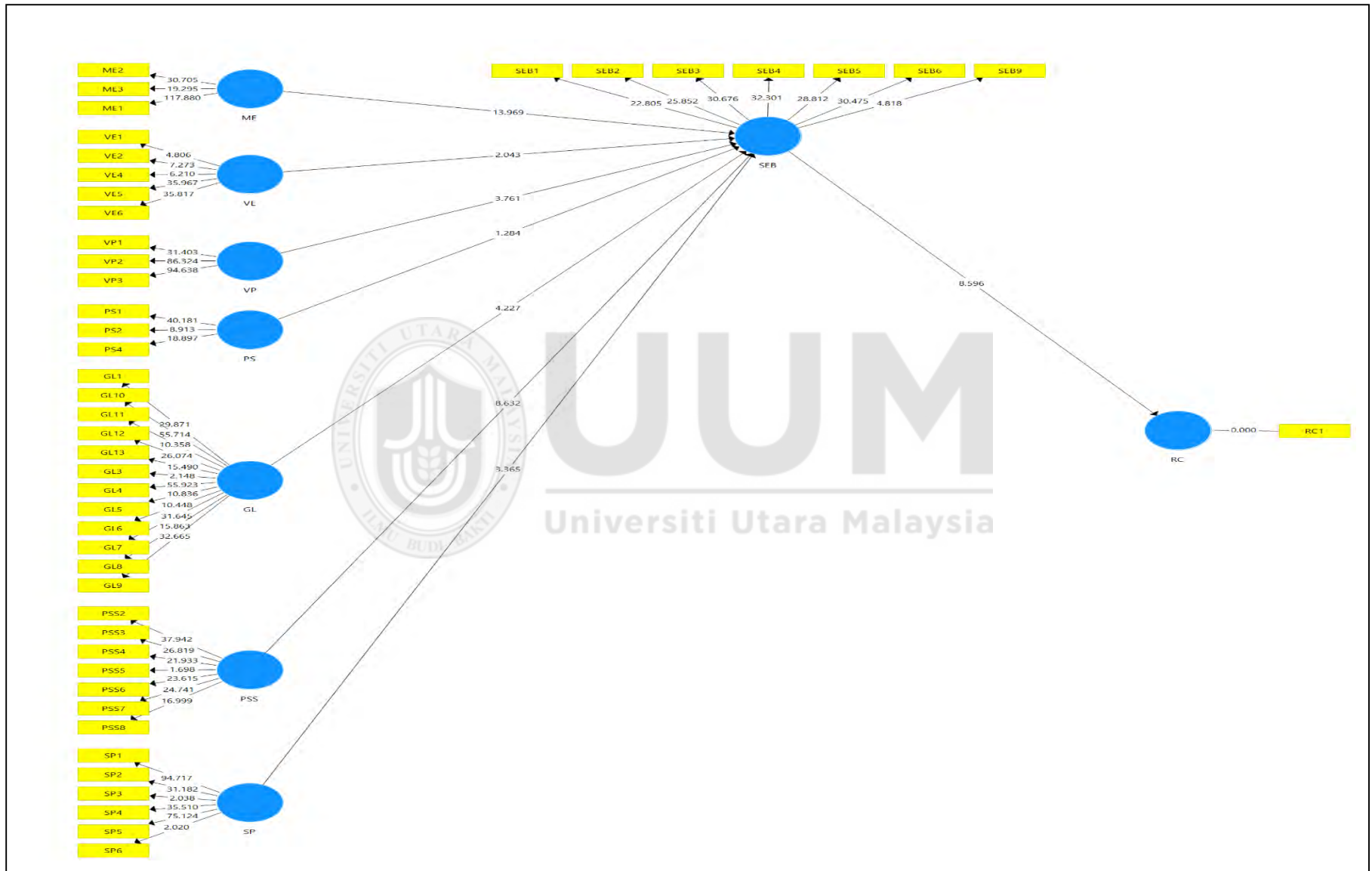


Figure 4.7 PLS Algorithm Direct and Indirect Relationships

Based on the PLS-SEM algorithm as highlighted above, Figure 4.6 demonstrates the path coefficient of exogenous as well as endogenous variables. The findings show that all the exogenous constructs show a positive coefficient with the endogenous construct except the relationship between VP and SEB; which shows negative coefficient. The outcome of the PLS-SEM algorithm in Figure 4.7 reveals that six independent variables have significant relationships with the dependent variable at $p < .05$, whereas one independent variable, PS shows an insignificant relationship. P-values, path coefficients and t-statistics are provided in Table 4.7.

Table 4.7

Results of Hypotheses Testing (Direct Relationships)

Hypotheses	Relationships	Coefficient	SD	T Statistics	P Values	Decision
H1	ME -> SEB	0.498	0.036	13.969	0.000	Supported
H2	VE -> SEB	0.077	0.038	2.043	0.042	Supported
H3	VP -> SEB	-0.107	0.028	3.761	0.000	Supported
H4	PS -> SEB	0.046	0.036	1.284	0.200	Not supported
H5	GL -> SEB	0.152	0.036	4.227	0.000	Supported
H6	PSS -> SEB	0.301	0.035	8.632	0.000	Supported
H7	SP -> SEB	0.120	0.036	3.365	0.001	Supported
H8	SEB -> RC	0.470	0.055	8.596	0.000	Supported

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

Regarding H1, the findings indicate that there is a positive impact of ME on SEB (β 0.498; $t=13.969$); hence, H1 is supported. Similarly, in case of H2, the findings show that there is a positive impact of VE on SEB (β 0.077; $t=2.043$), therefore, H2 is supported. Furthermore, for H3, the results show that there is a negative influence of VP on SEB (β -0.107; $t=3.761$), thus, H3 is supported as well. However, H4 is not supported due to the

reason that the findings demonstrate no substantial effect of PS on SEB (β 0.046; $t=1.284$). For H5, the results demonstrate that GL has a positive influence on SEB (β 0.152; $t=4.227$). Hence, H5 is supported. In the same way, H6 is supported as there is a positive impact of PSS on SEB (β 0.301; $t=8.632$). Similarly, H7 is supported as SP has a positive influence on SEB (β 0.120; $t=3.365$). Lastly, H8 is supported as well and the findings show that the mediating variable, SEB is positively influencing the dependent variable, RC (β 0.470; $t=8.596$).

4.5.2.2 Mediation Test (Findings of Research Questions Eight and Nine)

The evaluation of indirect influence of the independent construct on the dependent construct was done by mediation analysis by introducing a mediating construct. Preacher and Hayes (2008) affirmed that there are several methods for evaluating mediation, including a causal steps strategy or a serial approach (Hoyle & Robinson, 2004). Some additional methods to conduct mediation analysis include, a Sobel test or the product of coefficient method (Sobel, 1982), a bootstrapping approach (Hayes, 2009; Preacher & Hayes, 2004), and the distribution of the product approach (MacKinnon, Fairchild, & Fritz, 2007; MacKinnon, Fritz, Williams, & Lockwood, 2007; MacKinnon, Lockwood, & Williams, 2004). The bootstrapping method is considered as the latest analysis method for mediation in which the empirical demonstration of the sample distribution of the indirect influence is generated by bootstrapping (Hayes, 2009; Rucker, Preacher, Tormala, & Petty, 2011).

The bootstrapping method was used for the assessment of path model by introducing a mediating variable. These path models consisting of t-values and path coefficients were assessed by employing ‘the PLS-SEM algorithm’ and ‘the bootstrapping method’, correspondingly (Hair Jr. et al., 2013). The main concern was to assess whether the relationships between independent constructs and the mediating construct, and the relationship between the mediating construct and the dependent construct were significant. Finally, the product of the path coefficients, which were significant, was divided by the standard error of the product $\left(\frac{a \times b}{Sab}\right)$ to assess the significance of the indirect influence.

Recognising the benefits of the bootstrapping approach over other approaches, Hair Jr. et al. (2013) and Hayes and Preacher (2010) recommend this method for examination of the significance of mediation. Therefore, the current study assessed the mediating role of SEB between ME, VE, VP, PS, GL, PSS and SP on RC by employing SmartPLS 3.0 (Ringle et al., 2014) via the bootstrapping approach with 383 cases and 5,000 sub-samples. Figure 4.7 demonstrates the PLS-SEM algorithm in which SEB is acting as a mediating variable.

After the inclusion of the mediating variable, SEB in model 2, the bootstrapping outcome of 5,000 samples was employed to make the multiplication of path a and path b possible. Next, the outcome of two significant paths after multiplication was divided by the standard error of the product of the two paths $\left(\frac{a \times b}{Sab}\right)$ to obtain the t-value. It is evident from Table 4.8 that SEB mediates the positive association between ME and RC (β 0.234; $t=8.649$; $p<.05$); VE and RC (β 0.036; $t=2.084$; $p<.05$); VP and RC (β -0.050; $t=3.625$; $p<.05$); GL

and RC (β 0.071; $t=3.615$; $p<.05$); PSS and RC (β 0.142; $t=5.256$; $p<.05$); and SP and RC (β 0.056; $t=2.851$; $p<.05$). However, Table 4.8 demonstrates that SEB does not mediate the relationship between PS and RC (β 0.021; $t=1.307$; $p>0.05$).

Table 4.8

Results of Hypotheses Testing (Indirect Relationships)

Hypotheses	Relationships	Coefficient	SD	T Statistics	P	
					Values	Decision
H9	ME -> SEB -> RC	0.234	0.027	8.649	0.000	Mediated
H10	VE -> SEB -> RC	0.036	0.017	2.084	0.038	Mediated
H11	VP -> SEB -> RC	-0.050	0.014	3.625	0.000	Mediated
H12	PS -> SEB -> RC	0.021	0.016	1.307	0.192	Not Mediated
H13	GL -> SEB -> RC	0.071	0.020	3.615	0.000	Mediated
H14	PSS -> SEB -> RC	0.142	0.027	5.256	0.000	Mediated
H15	SP -> SEB -> RC	0.056	0.020	2.851	0.005	Mediated

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

4.5.2.3 Coefficient of Determination (R^2)

For the purpose of evaluating the structural model, coefficient of determination (R^2) of dependent variables is considered as one of the most frequently employed benchmarks (Hair Jr. et al., 2013). Cohen (1988) proposes a criterion to evaluate R^2 . According to his criteria, 0.27, 0.13 and 0.12 denote significant, moderate and weak R^2 values. In the current study, R^2 values of both variables, i.e., reading comprehension (0.52) and self-efficacy beliefs (0.80) are significant, as shown in Table 4.9. In other words, all the independent variables (ME, VE, VP, PS, GL, PSS, SP) simultaneously explain 80% variance in the mediator (SEB). In the same way, R^2 value indicates that all the eight exogenous constructs (ME, VE, VP, PS, GL, PSS, SP, SEB) explain 52% variance in the dependent variable

(RC). Thus, on the basis of the evaluation of R^2 of the endogenous constructs, i.e., SEB (80%) and RC (52%), it is determined that the current model holds significant predictive validity.

Table 4.9

Coefficient of Determination (R^2)

Endogenous Variables	R Square
RC	0.522
SEB	0.801

Note. SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

4.5.2.4 Assessment of Effect Size (f^2)

After scrutinising the coefficient of determination of the endogenous variables (SEB & RC), the subsequent benchmark evaluates the effect size (f^2), as recommended by Hair Jr. et al. (2013). Effect size is the variation in R^2 among the main effects when a specific exogenous variable is present in the model and when that variable is missed out from the model. This act is performed deliberately to assess whether the skipped exogenous variable has a significant effect on the endogenous constructs (Hair Jr. et al., 2013). The formula written underneath is employed to determine the effect size of exogenous variable, where 0.02, 0.15, and 0.35 were suggested as small, medium and large effect sizes, correspondingly (Cohen, 1988). On the other hand, Chin et al. (2003) emphasise that even the smallest value of f^2 ought to be taken into account as it can affect the endogenous constructs.

$$f^2 = \frac{R^2_{\text{included}} - R^2_{\text{excluded}}}{1 - R^2_{\text{included}}}$$

In the current study, the exogenous variable's effect size was statistically significant to influence the endogenous constructs. The finding in Table 4.10 indicates the effect size of a specific exogenous variable on a particular endogenous variable. The outcome shows that majority of the exogenous variables possess small effect size on their corresponding endogenous variable. It is worth noting that the effect size of one of the self-efficacy sources (i.e., physiological state) is 0.009 which is quite low as compared to other constructs due to the reason that it showed an insignificant relationship with reading self-efficacy beliefs in the measurement model. In other words, physiological state did not affect reading self-efficacy beliefs significantly.

Table 4.10
Effect Size (f^2)

	RC	SEB
GL		0.065
ME		0.689
PS		0.009
PSS		0.293
RC		
SEB	0.284	
SP		0.032
VE		0.023
VP		0.024

Note. ME= Mastery Experience; VE= Vicarious Experience; VP= Verbal Persuasion; PS= Physiological State; GL= Global strategies; PSS; Problem-solving strategies; SP= Support strategies; SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

4.5.2.5 Assessment of Predictive Relevance (Q^2)

One more evaluation of the inner model is the predictive relevance ability of the model. The Stone–Geisser criterion was employed to evaluate the predictive relevance, which presumes that a structural model (inner model) is responsible to deliver the proof of prediction of the endogenous variable's indicators (Henseler et al., 2009). Therefore, the evaluation of predictive relevance Q^2 can be performed by employing the Stone–Geisser's Q^2 method which can be calculated by employing blindfolding processes (Hair Jr. et al., 2013; Henseler et al., 2009). Thus, the current study employed the Stone–Geisser criterion to evaluate the Q^2 by using a blindfolding process to acquire the cross-validated redundancy for endogenous variables (Hair Jr. et al., 2013), as shown in Figure 4.8.



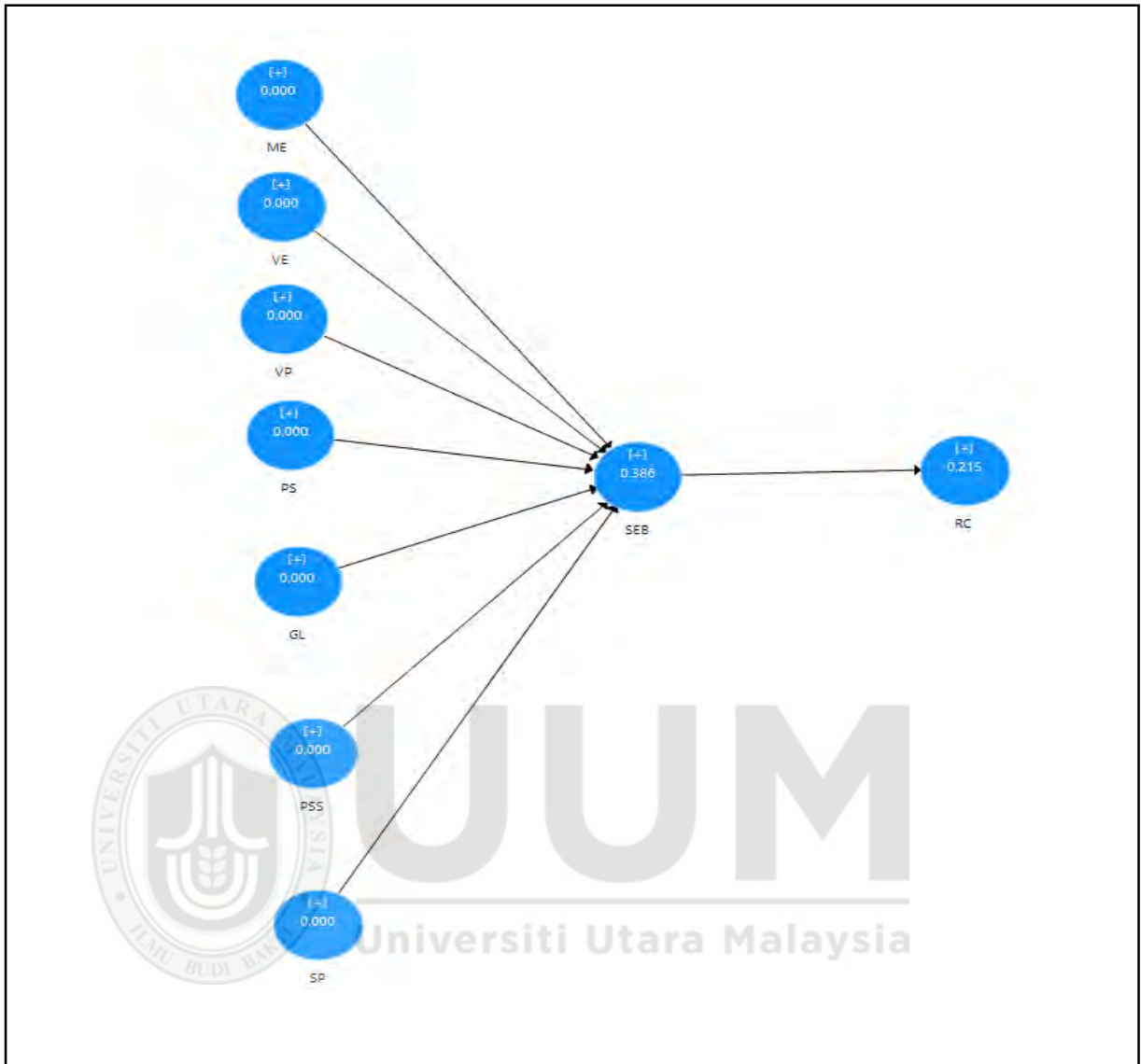


Figure 4.8. Blindfolding process

Cross-validated redundancy for SEB and RC is demonstrated in Table 4.11.

Table 4.11

Predictive Relevance (Q^2)

	SSO	SSE	$Q^2 (=1-SSE/SSO)$
RC	383	300.818	0.215
SEB	2,681.00	1,645.01	0.386

Note. SEB= Reading Self-efficacy Beliefs; RC= Reading Comprehension.

As evident in Table 4.11, the Q^2 values are higher than zero, i.e., SEB (0.38) and RC (0.21); this implies that there is significant predictive relevance in the current model. This is in agreement with the viewpoints of Hair Jr. et al. (2013) and Henseler et al. (2009) that if the value of Q^2 becomes higher than zero, it would imply that the model holds predictive relevance. On the other hand, if the value of Q^2 is lower than zero, it means that there is deficiency of predictive relevance in the model.

Lastly, Table 4.12 recapitulates the findings related to research hypotheses. Results indicated that 13 out of 15 hypotheses were supported by the findings of the current study.

Table 4.12
Recapitulation of the Findings of the Study

Hypotheses	Statement of Hypotheses	Decision
H1	There is a significant relationship between mastery experience and reading self-efficacy beliefs among Saudi EFL learners.	Supported
H2	There is a significant relationship between vicarious experience and reading self-efficacy beliefs among Saudi EFL learners.	Supported
H3	There is a significant relationship between verbal persuasion and reading self-efficacy beliefs among Saudi EFL learners.	Supported
H4	There is a significant relationship between physiological state and reading self-efficacy beliefs among Saudi EFL learners.	Not supported
H5	There is a significant relationship between global metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.	Supported
H6	There is a significant relationship between problem-solving metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.	Supported
H7	There is a significant relationship between support metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.	Supported

Table 4.12 (Continued)

Recapitulation of the Findings of the Study

Hypotheses	Statement of Hypotheses	Decision
H8	There is a significant relationship between reading self-efficacy beliefs and reading comprehension among Saudi EFL learners.	Supported
H9	Reading self-efficacy beliefs mediate the relationship between mastery experience and reading comprehension among Saudi EFL learners.	Supported
H10	Reading self-efficacy beliefs mediate the relationship between vicarious experience and reading comprehension among Saudi EFL learners.	Supported
H11	Reading self-efficacy beliefs mediate the relationship between verbal persuasion and reading comprehension among Saudi EFL learners.	Supported
H12	Reading self-efficacy beliefs mediate the relationship between physiological state and reading comprehension among Saudi EFL learners.	Not supported
H13	Reading self-efficacy beliefs mediate the relationship between global metacognitive reading strategies and reading comprehension among Saudi EFL learners.	Supported
H14	Reading self-efficacy beliefs mediate the relationship between problem-solving metacognitive reading strategies and reading comprehension among Saudi EFL learners.	Supported
H15	Reading self-efficacy beliefs mediate the relationship between support metacognitive reading strategies and reading comprehension among Saudi EFL learners.	Supported

4.6 Discussion of the Findings of Quantitative Data

This section discusses the findings of the research questions from one to nine in a chronological order.

4.6.1 Discussion of the Findings of Research Question One

The current section is allocated to the discussion of the results of first research question, i.e., what is the hierarchical order of the four self-efficacy sources reported by Saudi EFL

learners? With the aim of answering this question, the mean values of the reported self-efficacy sources were extracted from the statistical software SPSS 23.0, as reported in Table 4.1 and visualised in Figure 4.2.

The findings of the first research question have shown that out of four sources of self-efficacy, mastery experience was the most frequently reported source by the Saudi EFL learners with the mean value of 3.89 (refer to Table 4.1). In simple terms, the findings indicated that majority of Saudi EFL learners relied on their previous reading experiences that affected their current reading self-efficacy. This finding is in line with the findings of various studies (Britner & Pajares, 2006; Butz & Usher, 2015; Cantrell et al., 2013; Özyürek, 2005; Pajares et al., 2007; Usher & Pajares, 2009; Williams, 2017). For instance, Britner and Pajares (2006) found that mastery experience was the most reported self-efficacy source with the mean value of 4.0. Likewise, primary school learners in the UK also ranked mastery experience as the most reported science self-efficacy source (Williams, 2017). Similarly, Usher and Pajares (2009) found that mastery experience was ranked first with the mean value of 4.4.

The plausible explanation of highly reported mastery experience by Saudi EFL learners is that they might have experienced some memorable experiences regarding their reading in their past academic career. As a consequence, those memorable past experiences might have affected their reading self-efficacy. Bandura's (1986) social cognitive theory affirmed that mastery experience is the most influential source of self-efficacy among various academic fields (Usher & Pajares, 2008). Additionally, Britner and Pajares (2006)

asserted that successful previous experiences may boost one's self-efficacy beliefs, whereas, failures in the past may mitigate one's self-efficacy beliefs. This speculation, however, requires further investigation.

With regard to vicarious experience, this particular source was ranked second in the current study with the mean value of 3.77 (refer to Table 4.1). Although, it is the second most reported source of self-efficacy; however, its mean value indicates that Saudi EFL learners reported it with a high frequency. In simple words, the findings revealed that Saudi EFL learners relied greatly on observing other peers' reading performances which affected their own reading self-efficacy consequently. The findings of various past studies indicated that vicarious experience was ranked second out of four self-efficacy sources (Lin & Tsai, 2018; Usher & Pajares, 2009; Williams, 2017). For instance, Usher and Pajares (2009) found that vicarious experience was the second most reported math self-efficacy source ($M=3.9$). Likewise, Williams (2017) also found vicarious experience as the second most reported source with the percentage of 19% out of four self-efficacy sources. This finding is also supported by Bandura's (1997) social cognitive theory which affirmed that vicarious experience is one of the main sources of self-efficacy.

In the current study, the high reliance of Saudi EFL learners on vicarious experience can be attributed to the possibility that the sample was homogeneous in terms of capabilities to perform reading tasks. According to Schunk (1987), the learners observe and get influenced by their peers when their peers were on the same level with respect to the capabilities required to perform tasks. As the current study's sample consisted of learners

studying in Preparatory-Year-Programme (PYP), having the same age and almost the same language proficiency level, they observed each other's reading actions and performances to influence their reading self-efficacy (Bandura, 1997). Nevertheless, this speculation needs further confirmation from future researchers.

Verbal persuasion was ranked as the third most reported source by Saudi EFL learners with a mean value of 3.53 (refer to Table 4.1). This finding is in line with various studies (Joët et al., 2011; Lin, 2016; Lin & Tsai, 2018; Stevens et al., 2006; Usher & Pajares, 2006a; Usher & Pajares, 2006b; Usher & Pajares, 2009; Williams, 2017). For instance, Lin (2016) found that verbal persuasion was ranked as the third most reported source of computing science self-efficacy with the mean value of 3.49. Similarly, Lin and Tsai's (2018) findings revealed that verbal persuasion was the third most reported self-efficacy source with a mean value of 2.66. Likewise, Usher and Pajares (2006a) found that verbal persuasion was ranked as the third most reported academic self-efficacy source, with the mean value of 4.43. Also, in Joët's et al. (2011) study, verbal persuasion was reported to be the third most influential source among French learners with a mean value of 2.82.

In the current study, it is evident that the mean score of verbal persuasion is far less than the mean scores of mastery experience and vicarious experience. One of the possible reasons of this comparatively low reliance on verbal persuasion can be attributed to the lack of feedback from their teachers regarding their reading performance. Lack or utterly no feedback from teachers can be detrimental for their reading comprehension achievement. Schunk (1989) affirmed that learners who are not influenced verbally are

prone to face difficulties in their academic career due to the reason that they have self-doubts related to their capabilities to perform academic tasks. Another reason of Saudi EFL learners' less reliance on verbal persuasion could be due to unauthentic or fake feedback. Teachers need to be extra careful while giving feedback to their pupils. Unauthentic feedback could have a detrimental effect on learners' self-efficacy beliefs and eventually their performance could get affected negatively (Bandura, 1995). The speculations presented above, nonetheless, need further validation from future researchers.

Lastly, findings of the current study indicated physiological state as the fourth and least reported source with a mean score of 3.47 (refer to Table 4.1). There are several other studies which support this finding (Britner & Pajares, 2006; Butz & Usher, 2015; Fong & Krause, 2014; Joët et al., 2011; Klassen, 2004; Özyürek, 2005; Pajares et al., 2007; Usher & Pajares, 2006a; Usher & Pajares, 2006b; Usher & Pajares, 2009). For instance, Britner and Pajares (2006) found that physiological state was the fourth most reported source of science self-efficacy with a low mean value of 2.4. Also, Butz and Usher (2015) found that learners ranked physiological state as the least reported source with only 3.46%. Lastly, Pajares et al. (2007) also found the low mean values for this source ($M=2.49$). In the current study, it is apparent that learners reported this particular self-efficacy source, i.e., physiological state far less than mastery experience and vicarious experience. This finding could be attributed to the role of gender. The current study's sample consisted of only male Saudi EFL learners. Previous research indicated that boys are far less anxious than girls while performing academic tasks (Britner & Pajares, 2006; Kiran & Sungur, 2012). This speculation necessitates further validation from future researchers.

4.6.2 Discussion of the Findings of Research Question Two

This section is assigned to discuss the findings of second research question, i.e., what is the hierarchical order of usage of the three metacognitive reading strategies reported by Saudi EFL learners? The hierarchical order was found by employing the mean analysis in SPSS 23.0 (refer to Table 4.2). The mean values indicated that global reading strategies was the most reported strategy by the Saudi EFL learners with a mean value of 3.84. This finding is in line with several past research studies (Chen & Chen, 2015; Chumworatayee, 2012; Mudra, 2018; Panchu, Bahuleyan, Seethalakshmi, & Thomas, 2017; Ramli, Darus, & Bakar, 2011; Zhang, 2014). For instance, Chumworatayee (2012) found that global reading strategies was ranked first by the Thai teachers with the mean value of 3.98. Likewise, Mudra (2018) found that the Indonesian respondents reported global strategies as the most used strategy with the mean value of 2.84. Similarly, Zhang's (2014) study on Chinese college learners found the highest mean value of 3.64 for global strategies. The current study's finding could be attributed to the reason that their teachers might have taught them global strategies more than the problem-solving and support strategies to improve their reading comprehension. However, this speculation requires further confirmation from future studies.

The current study also revealed that problem-solving reading strategies was the second most frequently used strategy with the mean value of 3.51 (refer to Table 4.2). This finding is in line with a very few studies (Chen & Chen, 2015; Chumworatayee, 2012; Mudra, 2018; Ramli et al., 2011; Songsingchai, 2010). For instance, Songsingchai's (2010) study on 73 university learners majoring in English in Thailand found problem-solving strategies

as the second most frequently reported strategy with a mean value of 3.15. Ramli's et al. (2011) study on Malaysian university learners also found problem-solving strategies as the second most reported strategy with a mean value of 29.82. Lastly, Chen and Chen (2015) found that problem-solving strategies was the second most employed strategy by Taiwanese high school learners with a mean value of 3.75.

As stated above, problem-solving strategies was used highly with a mean value of 3.51 (refer to Table 4.2). This finding is conceivable as the usage of these techniques is easy and more direct as compared to support strategies (Park, 2010). Mokhtari and Sheorey (2002) defined them as follows: "problem solving strategies are the actions and procedures that readers use while working directly with the text. These are localized, focused techniques..." (p. 4). Some of the direct problem-solving strategies are as follows: 'I read slowly and carefully to make sure I understand what I am reading', 'I adjust my reading speed according to what I am reading', 'when text becomes difficult, I re-read it to increase my understanding'. The aforementioned problem-solving strategies do not necessitate the reader to employ many resources during reading. Thus, it can be speculated that the Saudi EFL learners employed problem-solving strategies with high frequency due to the reason that it is more direct and easy to use (Park, 2010). The current speculation needs further approval from future researchers.

The current study revealed that support reading strategies was ranked third most frequently used strategy with the mean value of 3.49 (refer to Table 4.2). This finding is in agreement with the following past studies (Ahmadian & Pasand, 2017; Alami, 2016; Alfangca &

Tamah, 2017; Alhaqbani & Riazi, 2012; Aziz et al., 2011; Azmuddin, Nor, & Hamat, 2017; Boonkongsaen, 2014; Chen & Chen, 2015; Chumworatayee, 2012; Eghlidi, 2014; Ekowati, 2013; Elhoweris, Alsheikh, & Haq, 2011; Jounto & Mustapha, 2016; Lien, 2011; Magogwe, 2013; Mónos, 2016; Mudra, 2018; Omar, 2014; Rajab et al., 2017; Ramli et al., 2011; Taki & Soleimani, 2012; Temur & Bahar, 2011; Zarrabi, 2015). For example, Boonkongsaen (2014) found that Thai university learners reported support strategies as the least used strategy with a mean value of 2.71. Also, in Alfangca and Tamah's (2017) study, Indonesian university learners reported the least usage of support strategies with a mean value of 3.27. Furthermore, Omani college learners indicated the least employment of support strategies with a mean value of 3.30 (Alami, 2016).

It is evident from the current study's findings that support strategies was used moderately as compared to the high usage of global and problem-solving strategies. A probable speculation for this finding is that the Saudi EFL learners might have considered support strategies more challenging as compared to the other two strategies. Some of the support strategies are as follows: 'when text becomes difficult, I read aloud to help me understand what I read', 'I paraphrase (restate ideas in my own words) to better understand what I read', 'I go back and forth in the text to find relationships among ideas in it'. The aforementioned support strategies can be taxing due to the reason that they require additional effort and resources from readers (Park, 2010). Another potential reason is that the Saudi EFL learners might be unacquainted with the usage of some of the support strategies. Some of the support strategies, for instance 'when reading, I translate from English into Arabic', 'when reading, I think about information in both English and Arabic',

and ‘I ask myself questions I like to have answered in the text’, might need more complicated techniques beyond reading lines of written texts (Park, 2010; Meniado, 2016). Lastly, it might be possible that the teachers of Saudi EFL learners have not taught them the usage of these strategies (Meniado, 2016). The aforementioned speculations require further validation from future studies.

4.6.3 Discussion of the Findings of Research Question Three

The current section is allocated to discuss the findings of the third research question, i.e., what is the level (high/low) of reading self-efficacy beliefs among Saudi EFL learners? The frequency statistics in SPSS 23.0 revealed that majority of the Saudi EFL learners (i.e., 61.4%) showed a higher level of reading self-efficacy, while 38.6% had a lower level of reading self-efficacy (refer to Figure 4.4). In the past literature, several studies determined the level of reading self-efficacy (Al Ghraibeh, 2014; Butz & Usher, 2015; Ghonsooly, 2010; Murad Sani & Zain, 2011; Zare & Mobarakeh, 2011). For instance, in Butz and Usher’s (2015) study, 379 learners had a higher reading self-efficacy level, while 383 learners had a lower reading self-efficacy level. Likewise, Ghonsooly (2010) found that 73 Iranian university learners had higher reading self-efficacy, while 77 learners had lower reading self-efficacy. Furthermore, Al Ghraibeh (2014) found that the level of reading self-efficacy of Saudi university learners was high with a mean value of 3.934. Likewise, Zare and Mobarakeh (2011) found that the level of reading self-efficacy of Iranian high school learners was moderate with a mean value of 47 out of 70. Lastly, Murad Sani and Zain (2011) found that Malaysian teenage learners had a low reading self-efficacy level with a mean value of 2.44.

As stated earlier, the majority of the Saudi EFL learners have higher reading self-efficacy. This finding could be attributed to the reason that Saudi EFL learners have gathered reading self-efficacy from its four sources, i.e., mastery experience, vicarious experience, verbal persuasion, and physiological state. Bandura (1986) affirmed in social cognitive theory that self-efficacy in an individual gets elevated from aforementioned four self-efficacy sources. As a consequence of an elevation in self-efficacy, individual's performance is influenced. The current study's findings related to self-efficacy sources also indicated that the respondents reported self-efficacy sources with a high mean value.

Another plausible explanation of the higher reading self-efficacy among Saudi EFL learners could be attributed to their higher English reading proficiency. They have to go through a mandatory English proficiency test before entering the 'Preparatory-Year-Programme' (PYP) of government universities. Generally, PYP follows tough criteria for selection of learners and thus, only brilliant learners are selected. Furthermore, as these learners aim at joining prestigious professional colleges like 'College of Medicine', 'College of Dentistry', 'College of Pharmacy', 'College of Applied Medical Sciences' and 'College of Engineering', their parents are also aware of the importance of their children's English language proficiency. Some of them travel abroad to English speaking countries for English language courses and some join local English language academies. Consequently, their English reading proficiency is already developed to a certain extent. Motivation on the part of the Saudi EFL learners can also be a factor for their higher English reading performance. Mills, Pajares and Herron (2006) affirmed that there was a

significant relationship between reading proficiency and reading self-efficacy. The above-mentioned speculations necessitate further confirmation from future researchers.

4.6.4 Discussion of the Findings of Research Question Four

This section discusses the research findings of the fourth research question, i.e., what is the level of reading comprehension of Saudi EFL learners? The reading comprehension level of the Saudi EFL learners was categorised into five levels. The researcher employed frequency statistics in SPSS 23.0 to determine the percentage of learners in each level of reading comprehension. Findings revealed that 92 (24.0%) learners were placed in the category of ‘good readers’. Also, 183 (47.8%) learners were considered as ‘above average readers’. In addition, 76 (19.8%) participants were regarded as ‘average readers’. Only 9 (2.3%) learners were ‘below average readers’. Lastly, 23 (6%) learners were placed in the category of ‘poor readers’ (refer to Figure 4.5).

It is evident from the aforementioned findings that the majority of the Saudi EFL learners were either ‘good readers’ or ‘above average’ readers. This finding can be attributed to the usage of reading strategies by them which consequently improved their reading comprehension performance. Numerous studies indicated that there is a positive and significant relationship between reading strategies usage and reading comprehension performance (Ahmadi et al., 2013; Hou, 2013; Ismail, 2014; Rastegar, Kermani, & Khabir, 2017; Zhang & Seepho, 2013). This finding can also be attributed to the reading strategies instruction by the teachers of Saudi EFL learners. Thus, it can be speculated that due to effective reading strategies instruction, the reading comprehension performance of the

Saudi EFL learners might have improved. Previous literature confirmed that reading strategies instruction improves reading comprehension performance of the readers (McKeown, Beck, & Blake, 2009; McNamara, 2012; Ness, 2016; Rupley, Blair, & Nichols, 2009; Spörer, Brunstein, & Kieschke, 2009). These speculations need further confirmation from future researchers.

The past studies reported the reading comprehension level in different ways, i.e., high, moderate or low (Alfangca & Tamah, 2017; Al Ghraibeh, 2014; Eslami & Fatahi, 2008; Murad Sani & Zain, 2011; Su & Wang, 2012; Yoğurtçu, 2012). For instance, Yoğurtçu (2012) found that the reading comprehension level of Kyrgyz university learners was high, with a mean score of 111.34 out of 135. Similarly, Al Ghraibeh (2014) found that the level of reading comprehension of Saudi university learners was high. Alfangca and Tamah's (2017) study revealed that the reading comprehension level of the Indonesian university learners was moderately low, with a mean value of 58. Also, Su and Wang (2012) found that the level of English reading proficiency of Taiwanese junior high school learners was medium, with a mean score of 67.40. Lastly, Eslami and Fatahi (2008) examined the proficiency level of all the four skills of English language. The respondents of study were Iranian teachers. It was revealed that out of four skills, Iranian teachers' level was highest in reading skills.

4.6.5 Discussion of the Findings of Research Question Five

The current section aims at discussing the findings of the fifth research question, i.e., to what extent are self-efficacy sources correlated to reading self-efficacy beliefs among

Saudi EFL learners? The proposed hypotheses to determine the association between four self-efficacy sources and reading self-efficacy beliefs were as follows:

H₁: There is a significant relationship between mastery experience and reading self-efficacy beliefs among Saudi EFL learners.

H₂: There is a significant relationship between vicarious experience and reading self-efficacy beliefs among Saudi EFL learners.

H₃: There is a significant relationship between verbal persuasion and reading self-efficacy beliefs among Saudi EFL learners.

H₄: There is a significant relationship between physiological state and reading self-efficacy beliefs among Saudi EFL learners.

The findings of the fifth research question (refer to Table 4.7) indicated that three out of four reading self-efficacy sources, i.e., mastery experience, vicarious experience, and verbal persuasion were significantly correlated with reading self-efficacy beliefs. However, physiological state was not significantly correlated with reading self-efficacy beliefs. In the coming paragraphs, the above-mentioned findings are discussed in light of previous studies.

As stated above, mastery experience was significantly correlated with reading self-efficacy beliefs (β 0.498; $t=13.969$). Also, the direction of the relationship was found to be positive. In simple words, the findings indicated that previous reading experiences of the Saudi EFL learners boosted their reading self-efficacy beliefs. Cantrell et al. (2013) affirmed that

individuals who encountered positive successful experiences in the past have a higher level of self-efficacy as compared to those who encountered negative and unsuccessful experiences. The effect of mastery experience on performance was also explained by social cognitive theory (Bandura, 1986). It affirmed that learners generate self-efficacy beliefs from their past experiences. The past experiences could be positive as well as negative. Positive mastery experiences (achievements) boost self-efficacy, whereas, negative mastery experiences (failures) lower self-efficacy beliefs among learners. Consequently, Bandura (1986) asserted that self-efficacy in turn affects the performance of the individuals. Thus, the current study's findings could be attributed to the possibility that Saudi EFL learners might have experienced positive mastery experience related to reading, which were responsible for increasing their reading self-efficacy beliefs. This finding is in line with several studies (Arslan, 2012; Britner & Pajares, 2006; Chen & Usher, 2013; Joët et al., 2011; Kaya & Bozdog, 2016; Kiran & Sungur, 2012; Kudo & Mori, 2015; Lin, 2016; Lin & Tsai, 2018; Phan, 2012; Phan & Ngu, 2016; Tschannen-Moran & McMaster, 2009; Usher & Pajares, 2009). The aforementioned speculation requires further approval from future studies.

Similarly, vicarious experience was significantly correlated with reading self-efficacy beliefs (β 0.077; $t=2.043$). Furthermore, the relationship was positive. In other words, the findings indicated that whenever Saudi EFL learners observed their peers or other models performing well in reading, their reading self-efficacy beliefs increased. This finding is in line with other studies (Arslan, 2012; Britner & Pajares, 2006; Chen & Usher, 2013; Hampton & Mason, 2003; Kaya & Bozdog, 2016; Lin, 2016; Lin & Tsai, 2018; Phan &

Ngu, 2016; Tschannen-Moran & McMaster, 2009; Usher & Pajares, 2009). Social cognitive theory also affirmed that one can observe other successful peers/role models and their success can persuade one to believe that one can accomplish similar task (Bandura, 1986). However, regarding models in a learning environment, greater self-efficacy can be achieved by the learners in completing a specific academic task by observing more relevant models, i.e., peers instead of unrealistic models, i.e., teachers. As the level of skills of the teachers is far higher as compared to the skills' level of the learners, the learners are convinced in doing the similar task again when they observe their peers who are on the same level in terms of skills as compared to observing the teachers of different skills level. In addition to the skills, related characteristics (age, sex and ethnic background) of the peer models can be influential factors. Therefore, the models that are more related to the learners can have a higher influence on the self-efficacy beliefs and performance of the learners (Schunk & Hanson, 1985; Schunk, 1987).

In the current study, the sample consisted of Saudi EFL learners. All of them were in the same class and shared similar educational level and nationality. Thus, it can be speculated that when they observed positive models in their class, in turn, their reading self-efficacy was elevated. Their teachers also encouraged loud reading in classes in the PYP. This activity provided the EFL learners with the opportunity of observing others' loud reading skills. As a consequence, this might have positively affected their reading self-efficacy. This conjecture needs further validation from future researchers.

Verbal persuasion was significantly correlated with reading self-efficacy beliefs (β -0.107; $t=3.761$). This finding is consistent with numerous past studies (Arslan, 2012; Britner & Pajares, 2006; Chen & Usher, 2013; Hampton & Mason, 2003; Joët et al., 2011; Kaya & Bozdog, 2016; Kiran & Sungur, 2012; Lin, 2016; Lin & Tsai, 2018; Phan, 2012; Phan & Ngu, 2016; Tschannen-Moran & McMaster, 2009; Usher & Pajares, 2009). However, the direction of the relationship was negative. In simpler terms, the finding indicated that Saudi EFL learners' reading self-efficacy decreases upon receiving feedback from teachers and other people.

The possible speculation for a negative relationship between verbal persuasion and reading self-efficacy beliefs could be unauthentic appreciation from teachers or other important people in the life of Saudi EFL learners. Penny Ur (1996), a well-known EFL teacher, cautions that the appreciation passed by the teacher can be devaluated by the learner if it is used excessively. Furthermore, he affirmed that authentic and convincing applause can be beneficial to the learners and vice versa. Sometimes, the learners assume that good words from teachers' side are fake and consequently they do not get stimulated by it. As a matter of fact, clichéd and unauthentic praise can instigate annoyance among learners (Penny Ur, 1996). Similarly, mediocrity should not be appraised or else the learners would get used to the average performances and would not push themselves harder towards excellence. Also, Williams' (2017) study found that false feedback decreases self-efficacy as learners get an idea that the teachers or peers are trying to be kind to them. Thus, in view of the above discussion, it can be speculated that the Saudi EFL learners might have received

unauthentic or fake appreciation from their teachers, which in turn decreased their reading self-efficacy. However, this speculation needs further confirmation from future studies.

Lastly, physiological state was not significantly correlated with reading self-efficacy beliefs (β 0.046; $t=1.284$). In other words, this finding indicated that learners' nervousness did not affect their reading self-efficacy beliefs. In the previous literature, very few studies found this result (Arslan, 2012; Phan, 2012; Phan & Ngu, 2016). Phan (2012) also found that there is no significant relationship between physiological state and English self-efficacy. Similarly, Phan and Ngu (2016) piloted a longitudinal study on 328 elementary school learners in Australia. Data was collected in three phases. It was found that in the first two phases, there was no significant relationship between physiological state and self-efficacy. However, in the third phase, there was a significant but weak relationship among two variables. Also, Arslan (2012) conducted a study on 1049 6th and 8th Grade learners in Turkey. He found that physiological state is not significantly correlated with learning self-efficacy beliefs.

The possible speculation of an insignificant relationship between physiological state and reading self-efficacy could be lack of interest of Saudi learners in studies. It is a general conception that majority of the Saudis are wealthy. So, it could be speculated that they do not get anxious related to activities regarding studies. For instance, Razek and Coyner (2014) conducted a qualitative study regarding Saudi learners studying in an American university. He concluded that Saudi learners were not afraid of academic failure as they had no financial worries. Likewise, Abdel-Khalek and El-Yahfoufi (2005) conducted a

study on Lebanese rich and poor university learners to determine their level of anxiety. They found that rich learners reported significantly less anxiety as compared to poor learners. Several studies indicated that Saudi learners had a moderate level of anxiety. Alshahrani (2016) found that 75 Saudi EFL university learners had a moderate level of foreign language anxiety (FLA). Also, Alrabai (2014) found that 1389 Saudi EFL learners had a moderate level of FLA. Likewise, Alshahrani and Alshahrani (2015) piloted a study on 260 Saudi grade six learners and found their FLA level as moderate. It can be speculated from the aforementioned studies that EFL Saudi learners do not get anxious generally with regard to learning foreign language, though this speculation requires further investigation.

4.6.6 Discussion of the Findings of Research Question Six

The present section intends to discuss the results of the sixth research question, i.e., to what extent are metacognitive reading strategies correlated to reading self-efficacy beliefs among Saudi EFL learners? The proposed hypotheses to test the association between three metacognitive reading strategies and reading self-efficacy beliefs were as follows:

H5: There is a significant relationship between global metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

H6: There is a significant relationship between problem-solving metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

H7: There is a significant relationship between support metacognitive reading strategies and reading self-efficacy beliefs among Saudi EFL learners.

The findings of the sixth research question revealed that all the three metacognitive reading strategies (i.e., global, problem-solving, and support strategies) are significantly correlated with reading self-efficacy beliefs. In simple terms, the findings indicated that greater usage of metacognitive reading strategies by Saudi EFL learners increased their reading self-efficacy and vice versa. The findings of the current study are consistent with several studies which indicated a significant relationship between metacognitive reading strategies and self-efficacy beliefs (Ahmadian & Pasand, 2017; Kargar & Zamanian, 2014; Keskin, 2014; Li & Wang, 2010; Naseri & Zaferanieh, 2012; Shang, 2010; Zare & Mobarakeh, 2011).

According to Sheorey and Mokhtari (2001), “skilled readers . . . are more able to reflect on and monitor their cognitive processes while reading. They are aware not only of which strategies to use, but they also tend to be better at regulating the use of such strategies while reading” (p. 445). Self-efficacy beliefs play a substantial role in learners’ selection of activities. To put it in another way, learners feel hesitant doing activities which they think are beyond their abilities and merely embark on those tasks or activities which they believe are within the reach of their abilities (Bandura, 1986). In addition, in Magogwe and Oliver’s (2007) study, self-efficacy beliefs and metacognitive strategies were highly correlated with each other as compared to the relationship of other strategies with self-efficacy beliefs. This may happen due to the reason that high self-efficacious learners are more autonomous and metacognitive strategies best harmonise with this characteristic.

The speculation of the current study’s findings can be attributed to the fact that Saudi EFL learners were highly self-efficacious in reading and thus were perhaps more enthused. Due

to this enthusiasm and motivation, they might have put more effort in the usage of the metacognitive reading strategies. Their more frequent usage of metacognitive reading strategies denotes that they were liable to be more involved (Linnenbrink & Pintrich, 2003) and more self-controlled in learning tasks (Zimmerman, 2000). The finding also delineates the substantial role of ‘reading self-efficacy beliefs’ in a way that readers approach their reading tasks. Furthermore, it authenticates Bandura’s (1977, 1986) theory that self-efficacy impacts the behaviours of the learners by means of influencing the way they reflect, self-motivate, and endure while facing challenging tasks. However, the above-mentioned speculations need further investigation.

4.6.7 Discussion of the Findings of Research Question Seven

The present section aims at discussing the findings of the seventh research question, i.e., to what extent are reading self-efficacy beliefs correlated to reading comprehension of Saudi EFL learners? The proposed hypothesis to test the association between reading self-efficacy beliefs and reading comprehension was as follows:

H₈: There is a significant relationship between reading self-efficacy beliefs and reading comprehension among Saudi EFL learners.

The findings of the seventh research question indicated that there was a significant relationship between reading self-efficacy beliefs and reading comprehension of the Saudi EFL learners (β 0.470; $t=8.596$). Furthermore, the direction of the relationship was positive. In simple words, the findings indicated that the reading comprehension

performance of the Saudi EFL learners improved with the increase in their reading self-efficacy beliefs. The possible speculation of current study's finding could be attributed to the usage of strategies by Saudi EFL learners while reading. A substantial amount of research in reading English as a foreign language (EFL) settings (e.g., Kargar & Zamanian, 2014; Li & Wang, 2010; Nosratinia et al., 2014; Tuncer & Dogan, 2016; Uçar, 2016) concluded that readers having high reading self-efficacy tend to employ various strategies while coping with reading tasks. For example, they set aims, manage their time, and employ cognitive and metacognitive strategies like "making inferences, note-taking, elaboration, grouping, deduction, and transferring" (Li & Wang, 2010, p. 153). Furthermore, they are more determined and industrious while confronting reading challenges (Wiltgen, 2011). These strategies as a consequence improve readers' accomplishments in reading tasks. The aforementioned speculation requires further investigation from future researchers.

Furthermore, this finding is supported by theoretical principles of social cognitive theory. It asserted that out of all the psychological variables, self-efficacy is the most significant predictor of academic success (Bandura, 1977). Also, this finding is in line with numerous past studies (Al Ghraibeh, 2014; Galla et al., 2014; Ghabdian & Ghafournia 2016; Guthrie, Klauda, & Ho 2013; Habibian & Roslan 2014; Hedges & Gable, 2016; Lee & Jonson-Reid, 2016; Naseri & Ghabanchi, 2014; Oh, 2016; Osman et al., 2016; Piercey, 2013; Rachmajanti & Musthofiyah, 2017; Salehi & Khalaji, 2014; Tabrizi & Jafari, 2015; Tobing, 2013).

4.6.8 Discussion of the Findings of Research Question Eight

This section's objective is to discuss the findings of the eighth research question, i.e., to what extent do reading self-efficacy beliefs mediate the correlation between four self-efficacy sources and reading comprehension among Saudi EFL learners? The proposed hypotheses to test the mediating effect of reading self-efficacy beliefs on the relationship between self-efficacy sources and reading comprehension were as follows:

H₉: Reading self-efficacy beliefs mediate the relationship between mastery experience and reading comprehension among Saudi EFL learners.

H₁₀: Reading self-efficacy beliefs mediate the relationship between vicarious experience and reading comprehension among Saudi EFL learners.

H₁₁: Reading self-efficacy beliefs mediate the relationship between verbal persuasion and reading comprehension among Saudi EFL learners.

H₁₂: Reading self-efficacy beliefs mediate the relationship between physiological state and reading comprehension among Saudi EFL learners.

The findings of the current study indicated that reading self-efficacy beliefs mediated the relationship between reading self-efficacy sources and reading comprehension except one self-efficacy source, i.e., physiological state (refer to Table 4.8).

It is worth mentioning here that the main reason of employing reading self-efficacy beliefs as a mediator is that the researcher wanted to examine the relationship between four self-efficacy sources and reading comprehension. It was not possible to determine the

relationship between self-efficacy sources and reading comprehension directly because there was lack of past research studies conducted on these two variables. According to Preacher et al., (2007), mediation (M) could occur, even if there is no direct relationship between independent variable (X) and dependent variable (Y). In other words, if M is influenced by X, and Y is influenced by M, then in turn, Y is indirectly influenced by X. Thus, the only way to determine the relationship between self-efficacy sources and reading comprehension was to introduce a mediating variable between two variables. The researcher employed reading self-efficacy beliefs as a mediator due to the reason that there is enough evidence in the literature which showed a significant relationship between self-efficacy sources and self-efficacy beliefs (Arslan, 2012; Bryant, 2017; Chen & Usher, 2013; Joët et al., 2011; Kaya & Bozdog, 2016; Kudo & Mori, 2015; Lin, 2016; Lin & Tsai, 2018; Phan, 2012; Phan & Ngu, 2016). Also, there are plentiful studies that showed a significant association between self-efficacy beliefs and reading comprehension (Al Ghraibeh, 2014; Galla et al., 2014; Guthrie et al., 2013; Jones et al., 2012; Klassen, 2010; Lee & Jonson-Reid 2016; Liem et al., 2008; Osman et al., 2016; Piercey, 2013).

Thus, the findings of the current study made a theoretical contribution by determining the relationship between self-efficacy sources and reading comprehension by employing reading self-efficacy beliefs as a mediating variable. More specifically, the current study is the first of its nature which examined the relationship between self-efficacy sources and reading comprehension. Earlier than this, several researchers examined the relationship between self-efficacy sources and a diverse range of variables including language proficiency, writing achievement, mathematics achievement, science achievement,

academic achievement etc. (e.g., Hampton & Mason, 2003; Joët et al., 2011; Pajares et al., 2007; Phan, 2012; Templin, 2011). However, little attention was given to research regarding the relationship between self-efficacy sources and reading comprehension. The review of literature clearly shows that there was a need to conduct a study on the relationship of self-efficacy sources and reading comprehension. Therefore, the current study filled this literature gap.

4.6.9 Discussion of the Findings of Research Question Nine

The aim of the present section is to discuss the results of the ninth research question, i.e., to what extent do reading self-efficacy beliefs mediate the correlation between metacognitive reading strategies and reading comprehension of Saudi EFL learners? The proposed hypotheses to test the mediating effect of reading self-efficacy beliefs on the relationship between metacognitive reading strategies and reading comprehension were as follows:

H₁₃: Reading self-efficacy beliefs mediate the relationship between global metacognitive reading strategies and reading comprehension among Saudi EFL learners.

H₁₄: Reading self-efficacy beliefs mediate the relationship between problem-solving metacognitive reading strategies and reading comprehension among Saudi EFL learners.

H₁₅: Reading self-efficacy beliefs mediate the relationship between support metacognitive reading strategies and reading comprehension among Saudi EFL learners.

The findings of the current study indicated that reading self-efficacy beliefs successfully mediated the relationship between metacognitive reading strategies (i.e., global, problem-solving, support) and reading comprehension (refer to Table 4.8). This finding is a theoretical contribution in the body of literature as there is dearth of studies involving metacognitive reading strategies, reading self-efficacy beliefs and reading comprehension in a single research framework. In the coming paragraph, previous studies are discussed involving the relationship between metacognitive reading strategies/reading self-efficacy beliefs and reading comprehension.

There exists a significant relationship between metacognitive reading strategies (independent variable) and reading comprehension (dependent variable) in the literature (Ahmadi et al., 2013; Hou, 2013; Ismail, 2014; Rastegar, Kermani, & Khabir, 2017; Zhang & Seepho, 2013). However, there is dearth of empirical evidence regarding the influence of metacognitive reading strategies on reading comprehension via reading self-efficacy as a mediating variable. For this reason, the researcher tested their relationship by introducing reading self-efficacy beliefs as a mediating variable.

PART 2: QUALITATIVE DATA

4.7 Findings of Qualitative Data

Qualitative findings were based on the tenth research objective, that is, to explore the Saudi EFL learners' perspectives on the influence of self-efficacy sources and metacognitive reading strategies on their reading comprehension. The current section has two major subsections. Section 4.7.1 explains the findings regarding the Saudi EFL learners' perspectives

on the influence of self-efficacy sources on reading comprehension. Moreover, Section 4.7.2 explains the findings regarding the Saudi EFL learners' perspectives on the influence of metacognitive reading strategies on reading comprehension.

4.7.1 Findings of the Saudi EFL Learners' Perspectives on the Influence of Self-efficacy Sources on Reading Comprehension

This section presents the findings related to the influence of four self-efficacy sources (i.e., mastery experience, vicarious experience, verbal persuasion, and physiological state) on reading comprehension among Saudi EFL learners.

4.7.1.1 Influence of Mastery Experience

Mastery experience is the first source of self-efficacy. This section discusses the influence of both positive and negative mastery experiences on the reading comprehension of Saudi EFL learners. Firstly, the findings related to positive mastery experience are presented. Learners mentioned various factors related to the positive mastery experience that could potentially influence their reading comprehension including the role of reading strategies, the role of a reading teacher, and topics of interest (refer to Figure 4.9).

S1, S4 and S6 considered the role of reading strategies that they employed successfully in the past as the main cause of reading comprehension improvement. For instance, S1 employed the technique of rereading the text and considered it vital for improvement in reading comprehension:

...What I remember was like when I read, I read all the time like repeat, repeat. That's what makes me improve in reading the passage. (S1)

S4 mentioned some of the reading strategies including skimming, scanning and using background knowledge to improve his reading comprehension.

Some of the respondents (i.e., S3, S4 & S5) considered the role of their English reading teachers as another main reason of improvement in their current reading comprehension.

In the first semester, when I came to this university's preparatory year programme (PYP), I had a very good lecturer. He taught me everything, I paid attention on reading skills (S3)

Credit goes to the teachers of my university who focused on teaching us the main reading strategies like, skimming, scanning and using background knowledge to improve our reading. (S4)

I remember in high school, there was a teacher of English and he has worked a lot on my reading skills. He used to pay special attention on me regarding reading skills and vocabulary. (S5)

Lastly, S2 indicated that 'topics of interest' played a crucial role in improving his reading comprehension:

Yea, actually when I took an exam three weeks ago, there was a passage about football. So, I did really well in that because I know almost everything about football and I like it. Actually, I have interest in football and if anything similar to that topic comes again, I will do well hopefully. (S2)

While the learners share their views on positive mastery experience, they also disclose various factors related to negative mastery experiences that could potentially influence

their reading comprehension including poor vocabulary, unfamiliarity with the topic, substandard school education system, and incompetent teachers (refer to Figure 4.9)

Some respondents (i.e., S3 & S4) shared that substandard school education system was the potential reason of their poor reading comprehension. They identified the problems like late exposure to reading and poor methods of reading a text.

Yes, I remember when I was in high school. At that time I used to perform poorly in reading tasks... Also, I started studying reading English in sixth grade. You know, it's really late. (S3)

I think in high school I used to perform really bad in all the reading tests. I still remember we use learn everything by heart and we had no understanding. Whenever I remember that high school time, it lowers my reading confidence for sure and affects my reading performance negatively. (S4)

Similarly, some of the learners blamed their teachers for their poor reading comprehension.

...he (the teacher) didn't teach me well and he just used to waste time. He wasn't a good teacher actually. (S3)

I think in high school I used to perform really bad in all the reading tests because there we didn't do anything regarding reading because our teachers didn't teach us about reading. (S4)

Unlike S3 and S4, the viewpoint of S6 was different. S3 and S4 criticised their English teachers for their poor teaching skills regarding reading. However, in the case of S6, the teacher embarrassed him in front of the class which affected his reading comprehension negatively.

I remember once in a high school, I read a passage and made a lot of mistakes during reading. So the teacher said, “Ok! Any other student answer should read”. At that time I became nervous and embarrassed. So, whenever, I remember that, ...that affects my reading performance up till now. (S6)

Among many factors, another potential factor related to negative mastery experience that influenced the reading comprehension of Saudi EFL learners negatively was ‘poor vocabulary knowledge’. S1 stated,

...Surely those poor performances because of poor vocabulary and grammatical skills would lower my reading performance of today. (S1)

Additionally, Saudi EFL learners considered ‘unfamiliarity with the topics’ as a possible factor regarding negative mastery experience that influenced their reading comprehension in a negative way. S2 stated,

A few days back, I got a topic about anthropology in the reading exam and I had no idea about it. So, how could I answer about it when I didn’t know about it, not even in Arabic. So, how could I answer it in English? (S2)

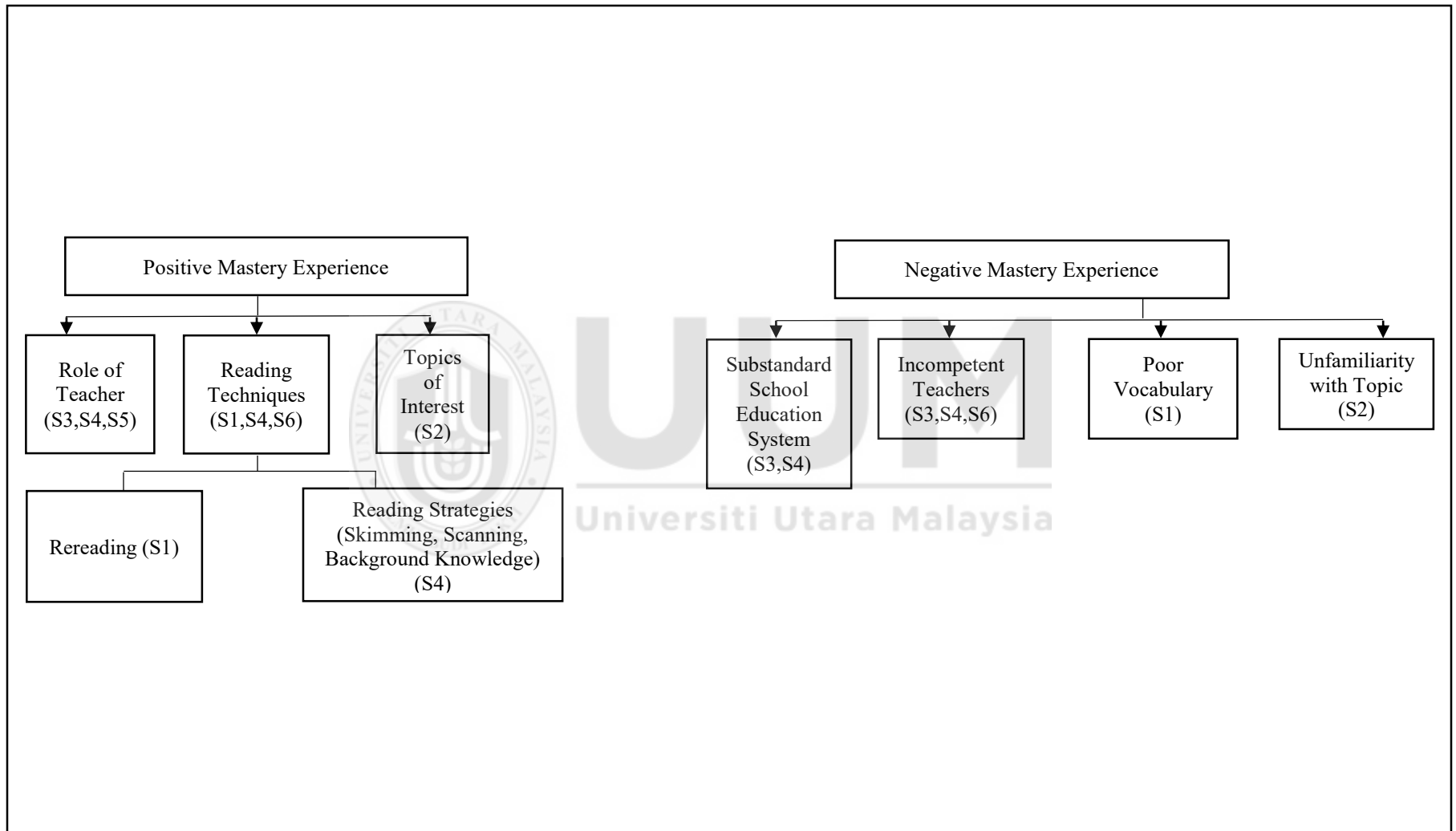


Figure 4.9. Summary of Findings of Mastery Experience

4.7.1.2 Influence of Vicarious Experience

Vicarious experience is the second source of self-efficacy. This section discusses the influence of both positive and negative vicarious experiences on the reading comprehension of Saudi EFL learners. Firstly, the findings regarding positive vicarious experience are presented. Learners mentioned various factors related to the positive vicarious experience that could possibly influence their reading comprehension including, getting motivation from peers, seeking help from peers, and competitive environment, as shown in Figure 4.10.

Saudi EFL learners of the current study compared themselves with other learners who were good in reading and were eventually motivated by them. S1, S2, S5 and S6 shared their views as follows:

When I see someone performing well in reading, I ask myself that if he can do it, why can't I? (S1)

I would study hard and try to improve and develop myself in reading to be like him or close to him. (S5)

S6 also compared himself with other learners, which increased his motivation, "So, I look at them and I say to myself, 'Insha Allah, I will be like them'". Similarly, S2 stated, "I would read a lot...and I would think that I can do the same, what he did."

Moreover, some of the respondents sought peers' help related to reading after observing their good reading performances. S3, S4 and S6 shared their views with regard to seeking help from peers, as follows.

...If I face any difficulty in reading, I used to consult her (his sister) and she taught me really well and I understand her completely. Usually if any of my classmates performs well in reading, I approach him and ask him what I don't know about reading. (S3)

I would try to force myself to do reading exercises and study with my cousins who are good in reading and would ask for help in reading. And also, I will ask my friends if I face problems in reading. (S4)

I go to them and talk to them like, "How did you improve your reading, what skills did you get, and how did you get them?" So then some of my classmates told me the techniques that they use while reading. (S6)

In addition, the majority of the respondents (i.e., S1, S2, S4, & S5) started working hard after observing their peers doing well in reading and consequently, that created a competitive environment among them. Thus, 'competitive environment' was a factor related to positive vicarious experience that influenced their reading comprehension.

When I see someone performing well in reading, I ask myself that if he can do it, why can't I? So, that thought keeps me going and I work hard to improve my reading performance. (S1)

I would think that he knows more than me about English language or reading. And that's why when I would get home, I would read a lot (S2)

Yes, when I know that he is better than me, I would work hard at home, I would try to force myself to do reading exercises (S4)

Actually, when anybody performs well in reading.... So, I would study hard and try to improve and develop myself in reading to be like him or close to him. (S5)

As the Saudi EFL learners disclose their opinions on positive vicarious experience, correspondingly they share several factors regarding negative vicarious experience that could potentially influence their reading comprehension including 'peer tutoring' and 'feeling of happiness on others' failures (schadenfreude)' as shown in Figure 4.10.

Some learners (i.e., S2, S3, & S4) felt sympathetic towards other learners who didn't perform well in reading and offered their assistance of teaching reading skills to them, which consequently affected their own reading performance as well.

Of course, I would teach reading to him and teaching him would make my reading good. (S2)

I will also teach him what I know and support him...At the end of day, I will get better in reading as well because if I have to teach someone, I have to prepare myself really well. (S3)

If he needs help, I can help him by teaching him the techniques to do reading comprehension test that I know. I will do a lot of preparation to teach him. So, this way my reading performance will get better too. (S4)

Surprisingly, one of the respondents (i.e., S6) felt happy about other peers' bad reading performances and that happiness led him to perform better in reading. There is a word called 'schadenfreude' which indicates this particular feeling. The literal meaning of this word is to feel happy on others' failures.

If I observe someone and he's not good in reading, I would feel happy because I would feel that I am good than him and that will give me motivation to perform good in reading exam even more. (S6)



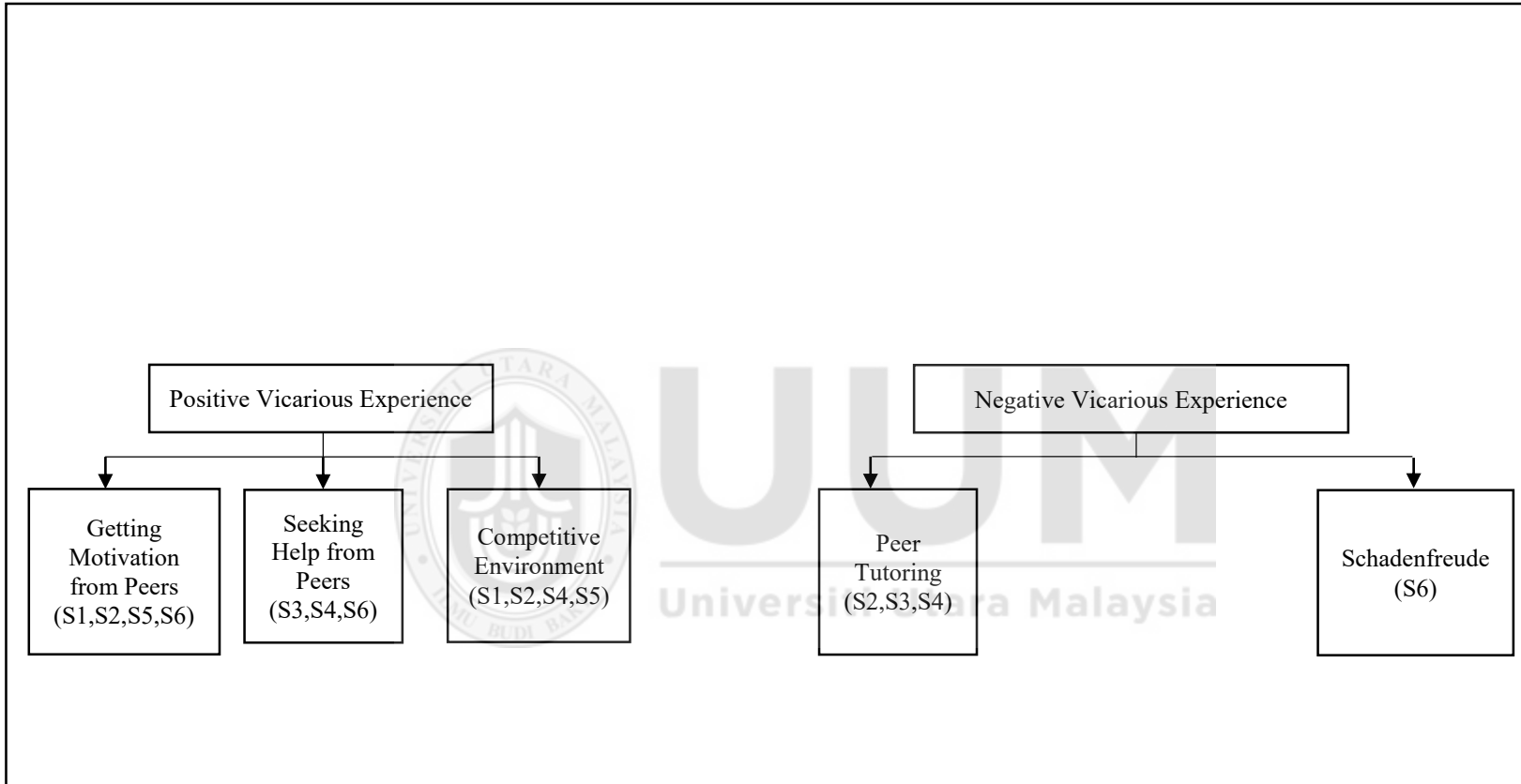


Figure 4.10. Summary of Findings of Vicarious Experience

4.7.1.3 Influence of Verbal Persuasion

Verbal persuasion is the third source of self-efficacy. This section discusses the influence of both positive and negative verbal persuasion on the reading comprehension of Saudi EFL learners. Firstly, the findings related to positive verbal persuasion are presented. Two major factors were stated by interviewees regarding the positive verbal persuasion that could potentially affect their reading comprehension performance including, ‘getting confidence’ and ‘gaining happiness from positive feedback’, as shown in Figure 4.11.

S1, S2, S4, and S5 claimed that good remarks from teachers or parents would increase their confidence in reading and eventually their reading comprehension is improved.

Respondents’ views are as follows:

They give you confidence. Sometimes, when you read in front of your parents and when they see you reading non-stop. They say, “Masha Allah, you are improving and we can see you improving in front of us”. (S1)

I will do much better because when I do something, I would remember that yes my teacher supported me and said words like, “you did well and blah blah”. (S2)

My teachers tell me like, “Good job, you are the best” or something like this. This makes me feel better and I work harder and of course, it boosts my reading confidence 200% and improve my reading performance. (S4)

My teachers here in PYP always praise me and that praise boosts my confidence level. (S5)

Moreover, S6 indicated that positive feedback from his teachers proved to be a source of happiness for him. As a consequence of happiness, his reading comprehension performance improved. S6 stated,

Yes, in the university, I hear a lot of good words or remarks from my teachers like, “Yes, you are doing well”....I will feel happy. When I’ll feel happy then I read well and surely like reading. (S6)

While the learners share their views on positive verbal persuasion, they also reveal numerous factors related to negative verbal persuasion that could possibly influence their reading comprehension including embarrassment, remaining absent from class, and negative effect on mental health, as shown in Figure 4.11.

S2 reported that if he received negative feedback from the teacher, he would be highly embarrassed in front of the class and disturbed to such an extent that he would remain absent in the next class. According to S2,

...I would remain absent in the next class due to embarrassment if someone utters bad words to me, especially if he/she is one of my parents or a teacher... So, yea I won’t be able to perform well in reading after those comments (S2)

S2 also indicated that these negative comments could be detrimental to his mental and psychological health which would consequently affect his reading comprehension performance. He stated,

That will affect my brain because I expect good words from them because when they say good words to me, I would be a better man. So, yea I won’t be able to perform well in reading after those comments (S2)

Moreover, S6 indicated that negative feedback would be extremely harmful to his reading.

It will decrease my confidence and affect my performance badly and I will hate reading because of those bad words. (S6)



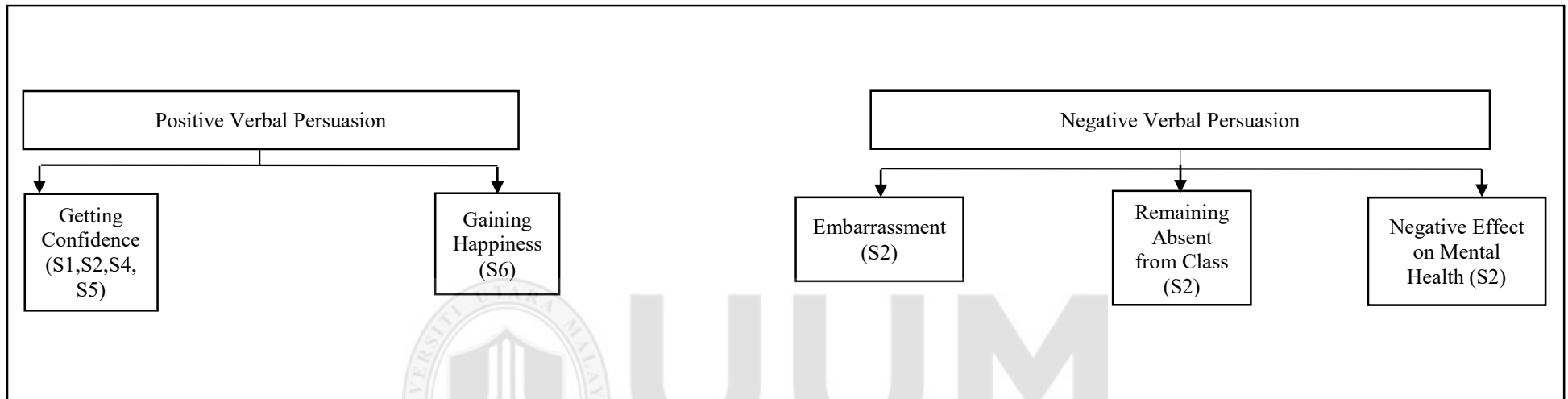


Figure 4.11. Summary of Findings of Verbal Persuasion

4.7.1.4 Physiological State and Reading Comprehension

Physiological state is the fourth source of self-efficacy. There were several major factors reported by the interviewees regarding the influence of physiological state on reading comprehension performance including, lack of time, difficulty of passage, lack of preparation, skipping words, lack of focus, fear of failure (refer to Figure 4.12).

Interestingly, several respondents (i.e., S1, S2, & S4) revealed that one of the main reasons of getting nervous in reading comprehension exam was lack of time, which consequently affected their reading comprehension negatively.

Well, during a reading exam, I become nervous on whether I can answer these questions or not because I have not enough time (S1)

Actually I feel nervous quite often especially when I am taking an exam because there is not enough time. Well, in the reading exam, I have just one hour for 3 passages and 40 questions to attempt. (S2)

Of course I feel nervous while doing any reading exercise in exam or class. I feel bad because I know there is not enough time and I don't understand words. (S4)

However, S5 and S6 provided different causes for their nervousness during reading that eventually affected their reading performance. For S5, 'difficulty of passage', and for S6, 'lack of preparation', were the main causes of nervousness, respectively.

When I read a passage [Pause] actually [Pause] if it's difficult or there is a difficult word, I would actually feel nervous and can't answer questions properly. (S5)

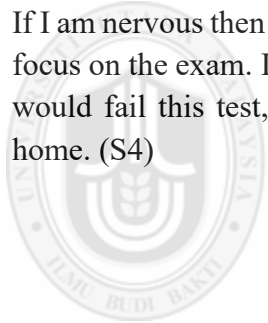
I would feel nervous if I haven't prepared the test or when I don't know about the passage. For instance, if the teacher takes a sudden quiz then surely I would feel nervous and can't perform good in reading. (S6)

Other factors that could account for their nervousness during reading are as follows:
skipping words, lack of focus, and fear of failure.

Sometimes when you are nervous, you skip words. For instance, if there is 'S' in the end of a word, but you can't see it. So, you make mistakes like this. (S1)

When I am nervous, I can't answer the questions because I am unable to think properly (S2)

If I am nervous then everything is going to be bad, really bad because I can't focus on the exam. I just [Pause] something happens inside my mind, like I would fail this test, I would be expelled from the university, go back to home. (S4)



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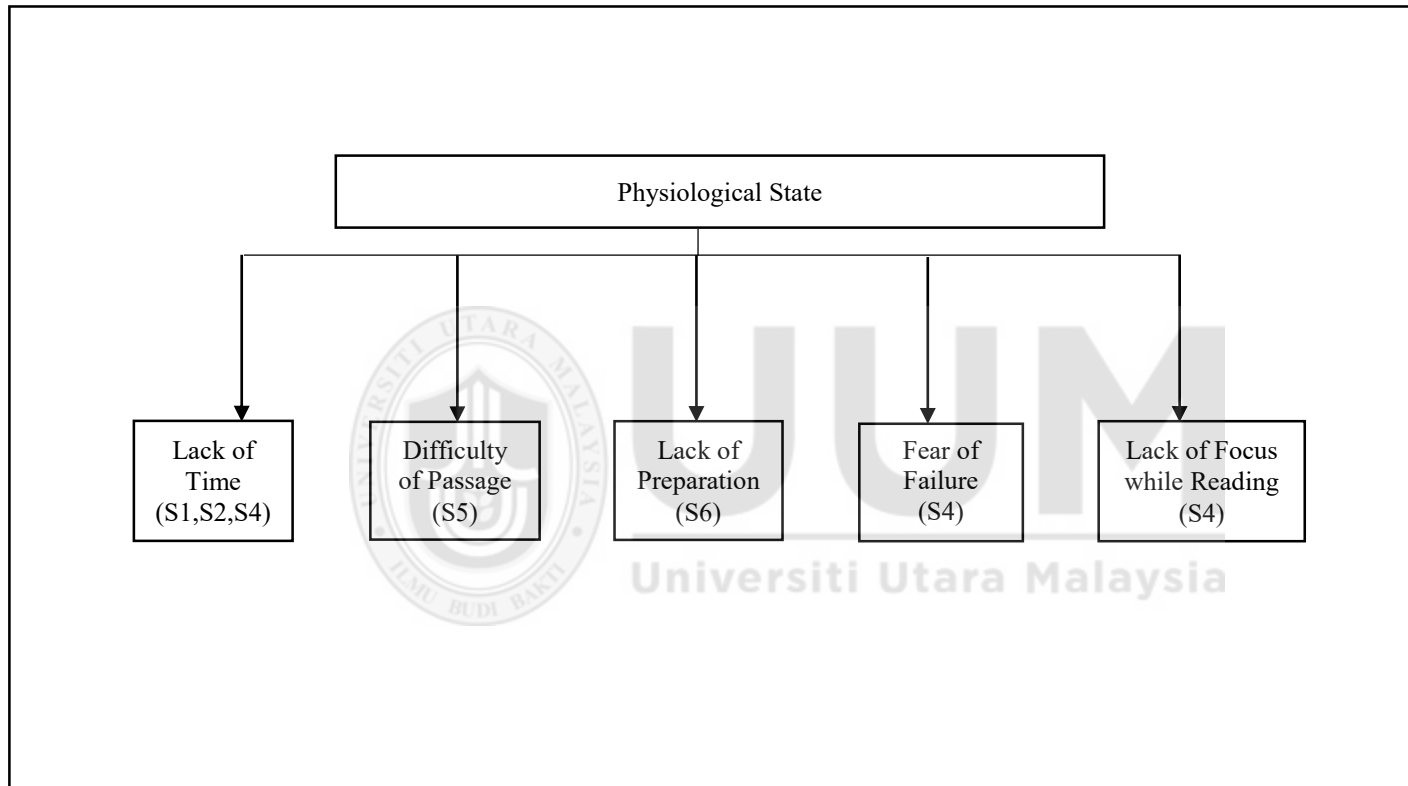


Figure 4.12. Summary of the Findings of Physiological State

4.7.2 Findings of the Saudi EFL Learners' Perspectives on the Influence of Metacognitive Reading Strategies on Reading Comprehension

This section presents the findings related to the influence of three metacognitive reading strategies (i.e., global, problem-solving & support strategies) on the reading comprehension of the Saudi EFL learners.

4.7.2.1 Influence of Global Reading Strategies

'Global strategies' is the first type of metacognitive reading strategies. Respondents were asked about their perspectives regarding the influence of the global reading strategies on their reading comprehension. They were specifically asked about four global reading strategies including, having a purpose before reading, using past knowledge, skimming, and guessing the content. The summary of the findings are shown in Figure 4.13.

First of all, regarding the first strategy (i.e., having a purpose in mind), respondents shared several perspectives including, why they used it and how its usage affected their reading comprehension. S1, S4 and S5 claimed that their purpose of reading was enjoyment. S4 stated that he always had a purpose before reading like reading for enjoyment. Similarly, S5 also agreed that whenever he has a free time, he reads blogs on the internet for leisure. Likewise, S1 explained:

Yes, sometimes I have a specific purpose. For instance, I read the novel to get enjoyment and when I read with enjoyment I don't find the text difficult.
(S1)

On the contrary, some respondents (i.e., S2, S4, & S5) had a different purpose (i.e., read to be successful in a reading comprehension exam).

I used to read ‘International geographic’ book when I was in England. So I had a purpose of reading that book because I had to appear in IELTS exam. (S2)

Additionally, it was revealed from the following comments of S4 and S5 that when they were preparing for the exams, they read with full concentration, whereas for other purposes (e.g., enjoyment), they don’t concentrate on the text too much. In other words, their degree of concentration depends on the purpose of reading.

...when I am doing reading comprehension exercise in the exam, I read with the purpose that I have to get good marks. So, I read with full concentration. Whereas, other times, I have other purposes like reading for enjoyment. (S4)

...when I have to read for exam or class assignment then I concentrate too much on every detail as I am preparing for exam. Whereas, when I have free time, I read blogs on internet for leisure. (S5)

Additionally, some respondents had other purposes of reading. For instance, S6 stated, “To understand the passage. That’s my purpose.” S3 had a purpose to read something to appease his curiosity about the content of the reading material.

I have a purpose like, I want to know what the writer would talk about in the passage? What’s the subject? Something like that. (S3)

Secondly, regarding the second global reading strategy (i.e., using past knowledge), the respondents revealed their viewpoints related to the influence of using this particular strategy on their reading comprehension. S3, S4 and S5 affirmed ‘topics of interest’ as an

important aspect in using their past knowledge. They claimed that they would be able to comprehend the text better if the reading passage synchronises with their topic of interest. Consequently, they would be able to use past knowledge regarding their topic of interest.

If the passage is about something that I adore like football, I would say, “O, he is talking about the football club that I support and they have very good players”. You know something like that. (S3)

Let’s suppose if the passage is about football and I have a vast knowledge about football, I would surely take help from that past knowledge (S4)

You know, for instance, when you love swimming and you have all the knowledge about swimming and when you read a passage about swimming, then, you will easily understand that passage. (S5)

In the same way, S1 and S2 shared their own experiences in which they employed past knowledge for better reading comprehension. S1 used past knowledge by reflecting on the experience that he once experienced in his real life. Whereas, S2 used it by remembering a past experience of watching a video on Youtube regarding the topic of the passage.

...if the passage is about airport, I would imagine everything about airport and would recall important information related to it. (S1)

...I remember that I have watched a video on Youtube related to DNA in human body. So, when I read DNA topic in my book, at that time I use my previous knowledge that I gathered by watching video. (S2)

Moreover, S6 provided an additional information. He reported that if the reading passage was related to his past knowledge, he would feel happy to read it. He explained:

If the passage was something related to my past experience, then I’ll be happy to read it. (S6).

Thereafter, regarding the third global reading strategy (i.e., skimming), respondents shared various perspectives related to the influence of the skimming strategy on their reading comprehension. S1 and S6 reported that they made use of the skimming strategy to read the passage quickly and it really helped them to comprehend the text quickly. S1 reported, “Yes, I do skimming. I use it to read a passage fast”. Similarly, S6 stated,

I make use of skimming always because if I want to read the text quickly, it’s really helpful (S6).

Moreover, some respondents also reported that they saved a lot of time by using the skimming strategy. For instance, S2 stated, “Skimming helps you in a way that you don’t waste your time”. Correspondingly, S6 stated, “...if you don’t have time, you can do skimming and get some ideas for that topic”.

Similarly, S2 and S6 also stated that this strategy is specifically very useful during a reading exam as there is shortage of time in it.

Skimming helps you in a way that you don’t waste your time... Specially, if you are taking an IELTS exam, that would help you. So, skimming and scanning are the most important (S2).

I make use of skimming always because if I want to read the text quickly, it’s really helpful. For example, in exams if you don’t have time, you can do skimming (S6).

Likewise, S6 and S3 admitted that they use the skimming strategy to get the main idea of the text. S6 stated, “...you can do skimming and get some ideas for that topic or something”. Similarly, S3 expounded,

Yes, I do skimming. I told you earlier that I read, I understand and I get the main idea of the passage (S3).

An interesting finding was reported by S5. He only used the skimming strategy when he encountered a difficult content. He explained,

If the passage is easy to understand then I read the whole passage quickly. Whereas, if it's difficult, then I use skimming to save time (S5).

Lastly, respondents shared their perceptions regarding the usage and influence of the fourth global strategy (i.e., guessing the content) on their reading comprehension. Four respondents (i.e., S1, S3, S4, & S5) stated that they used this strategy in a way that they guessed the content of the following paragraphs by reading the preceding paragraph.

Actually, most of the time, when the writer writes any essay or topic, all the paragraphs are connected to each other. So I can easily predict that what the next paragraph would be about (S1).

I can predict what's next paragraph is gonna be about. Like, if you get the main idea, you get the topic sentence, then the supporting sentence (S3).

I use it like if I am reading a passage regarding health then surely I would know that all the paragraphs in the topic will be about health. So, yes I make predictions this way (S4)

I make predictions all the time because when I read a paragraph, maybe, the first paragraph talks about the problems then obviously I would know that the next paragraph would be about solutions (S5).

Contrary to other respondents, S2 reported the use of guessing strategy while attempting a multiple choice questions (MCQs) in a reading comprehension exam.

Yea, guessing like if there's a question about filling the gap and I have to predict what's it gonna be in the gap e.g. adjective, verb or noun. That really helps me and prediction or guessing is useful (S2).



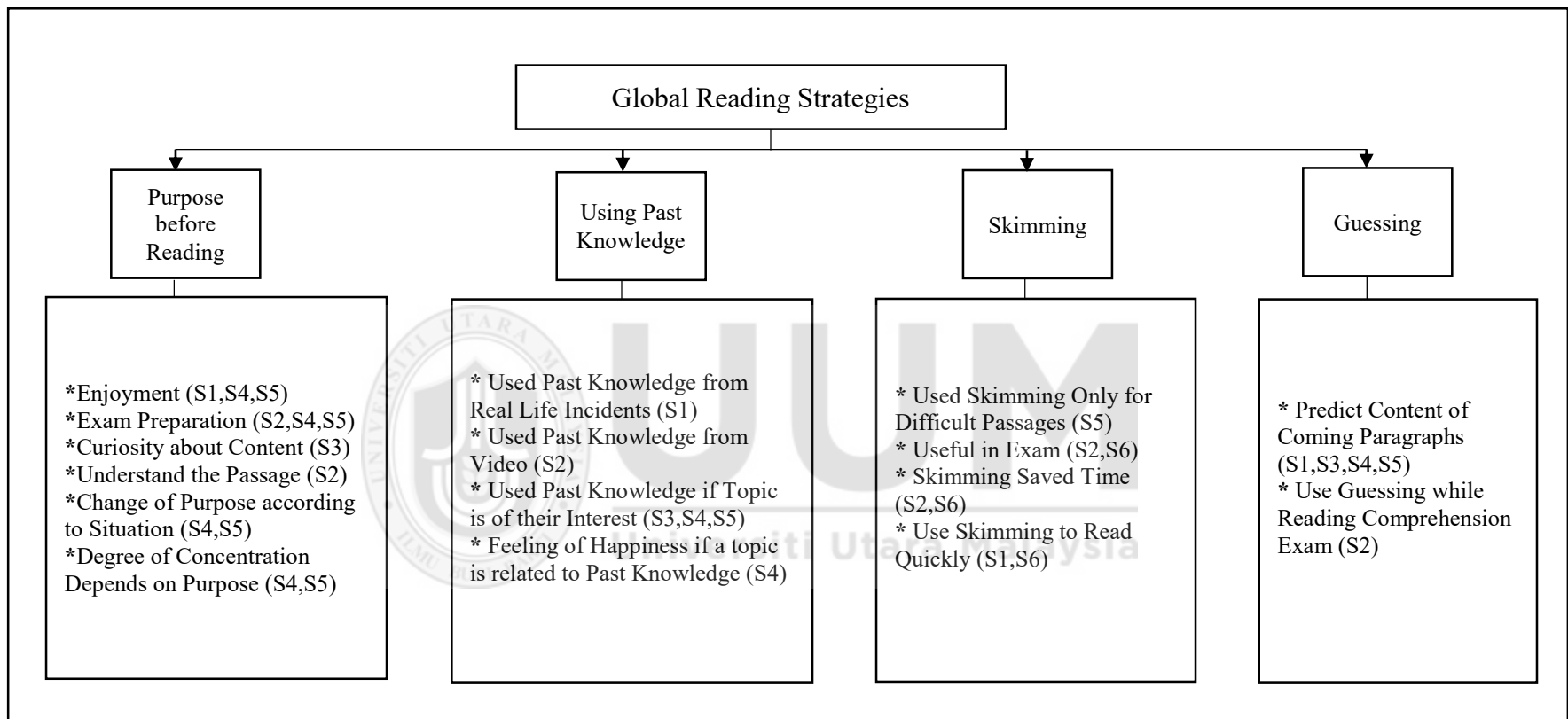


Figure 4.13. Summary of the Findings of Global Reading Strategies

4.7.2.2 Influence of Problem-solving Reading Strategies

'Problem-solving strategies' is the second type of metacognitive reading strategies. Respondents shared several perspectives regarding the influence of problem-solving reading strategies on their reading comprehension. They were particularly asked about four problem-solving reading strategies including reading slowly, rereading, visualising, and guessing the meaning of unknown words. Summary of the findings are presented in Figure 4.14.

First of all, regarding the first strategy (i.e., reading slowly), respondents shared various viewpoints including, why they used it and how its usage affected their reading comprehension. For instance, three respondents (i.e., S1, S4, & S6) stated that their purpose of reading slowly was to comprehend the text in a better way.

I keep on reading the text slowly until I get the meaning of the passage. It really helps me to understand the text better because I spend more time on it (S1).

I read very slowly... I read every single word. This way I understand everything. (S4)

I read slowly to get the meaning of everything and I also read slowly because I am afraid, I might skip something. So, that's why I read slowly to understand every sentence. (S6)

Additionally, S2 used this strategy to get the main idea of the passage. He stated,

Yes, I read slowly usually because when I read it slowly, I can get the main idea easily because I will read every single word. If I read quickly, it's difficult to get main idea. (S2).

Moreover, two respondents (i.e., S4 & S6) used this strategy to avoid skipping important words.

If I read it quickly, maybe I would skip some words or wouldn't understand some words and it would be tough this way. So, for that reason, I read every single word. This way I understand everything (S4).

I also read slowly because I am afraid, I might skip something. So, that's why I read slowly to understand every sentence (S6).

Furthermore, S3, S4 and S5 used the strategy of slow reading for several reasons including to break the words into parts, to get good marks in exam and to focus on the minor details of the text.

Yea, I read slowly and if any difficult word, I cut it into two to three parts to make it easy to read (S3).

I read very [Stress] slowly. I read every single word because this is going to help me to choose the good answer in reading comprehension MCQs (S4).

It is helpful because when you read slowly then you can focus on minor details and also your thinking becomes stronger. So, if you get all the small details, you can understand the passage surely (S5).

Secondly, regarding the second problem-solving reading strategy (i.e., rereading), the respondents revealed their viewpoints related to the influence of using this particular strategy on their reading comprehension. Moreover, they discussed the reasons of reading the text again which eventually led to better understanding of the text. Three respondents (i.e., S1, S3, & S6) stated that they read the text again to understand the text in a better way.

I read the text again and again until I get the meaning. It's really helpful. Every time I read the passage or sentence, it becomes clear (S1).

I read the text again because I have to understand the passage. So, after reading a passage many times, I get the meaning (S3).

...if I don't understand first sentence, the second sentence after first one will be difficult. So I read every sentence again and again (S6).

Moreover, S2 stated several reasons of using this particular strategy of rereading the text.

He explained,

Well [pause] yea I actually reread the text. Especially, if that's important and I have interest in that subject and also if I don't get the main idea then I am gonna reread it (S2).

Lastly, S4 stated that his usage of this strategy depended on the availability of time.

If there is time then yea, I read it again. If there is no time in the exam, I try to answer other questions (S4).

Thereafter, regarding the third problem-solving reading strategy (i.e., visualising), respondents shared various perspectives related to the usefulness of the visualising technique in improving reading comprehension.

Five respondents (i.e., S1, S2, S3, S4, & S6) confirmed that they visualised while reading to understand the text in a better way.

I do visualisation most of the time. It really helps me in understanding the passage because the whole scene comes in front of my eyes about the topic (S1).

I always imagine the situation that was presented in the text. And it's really helpful in understanding the text (S2).

I visualise while reading a passage. It really helps in understanding the text (S3).

Yes, of course. I think I have a big mind and I use my imagination for everything. So it's really helpful in reading comprehension as well (S4).

I always do visualisation because when you read the passage and then you don't think about what's in the passage, you won't know anything about it (S6).

Moreover, S3 claimed that he visualised the reading content and thus, synchronised with his own real-life previous experience to achieve better comprehension. He explained,

...If the passage is about 'airports', I would remember my nice days when I travelled to other country. So, I relate the reading topic with my own experience. It really helps in understanding the text (S3).

Last but not the least, the fourth problem-solving strategy (i.e., guessing the meaning of unknown words) was regarded as one of the important types of problem-solving reading strategies by the respondents in improving their reading comprehension. All the respondents indicated that they guessed the meaning of unknown words from the context to achieve better comprehension.

Sometimes, I come across words which are new to me and I don't know their meaning. Then I guess their meaning by looking at the context of sentence or paragraph (S1).

I usually guess the meaning of words from the context. When you know the context, it's easy to guess the meaning of unknown words (S2).

Yes, I guess the meaning by taking help from the passage. I read the passage and I guess the meaning of unknown words from context of the passage. It's really helpful because if you know the meaning of words, only then you would come to know about the main idea of the passage (S3).

Of course, yes! If I don't get the meaning of some words, I read the whole passage and when I read the whole passage, most of the time, I can understand what this word means (S4).

... when I read the information before and after that word, I can guess the meaning of that word (S5).

...Firstly, I read the sentence in which unknown word is present and then if I don't get it, I go to the next sentence and then I repeat it and then I guess its meaning (S6)



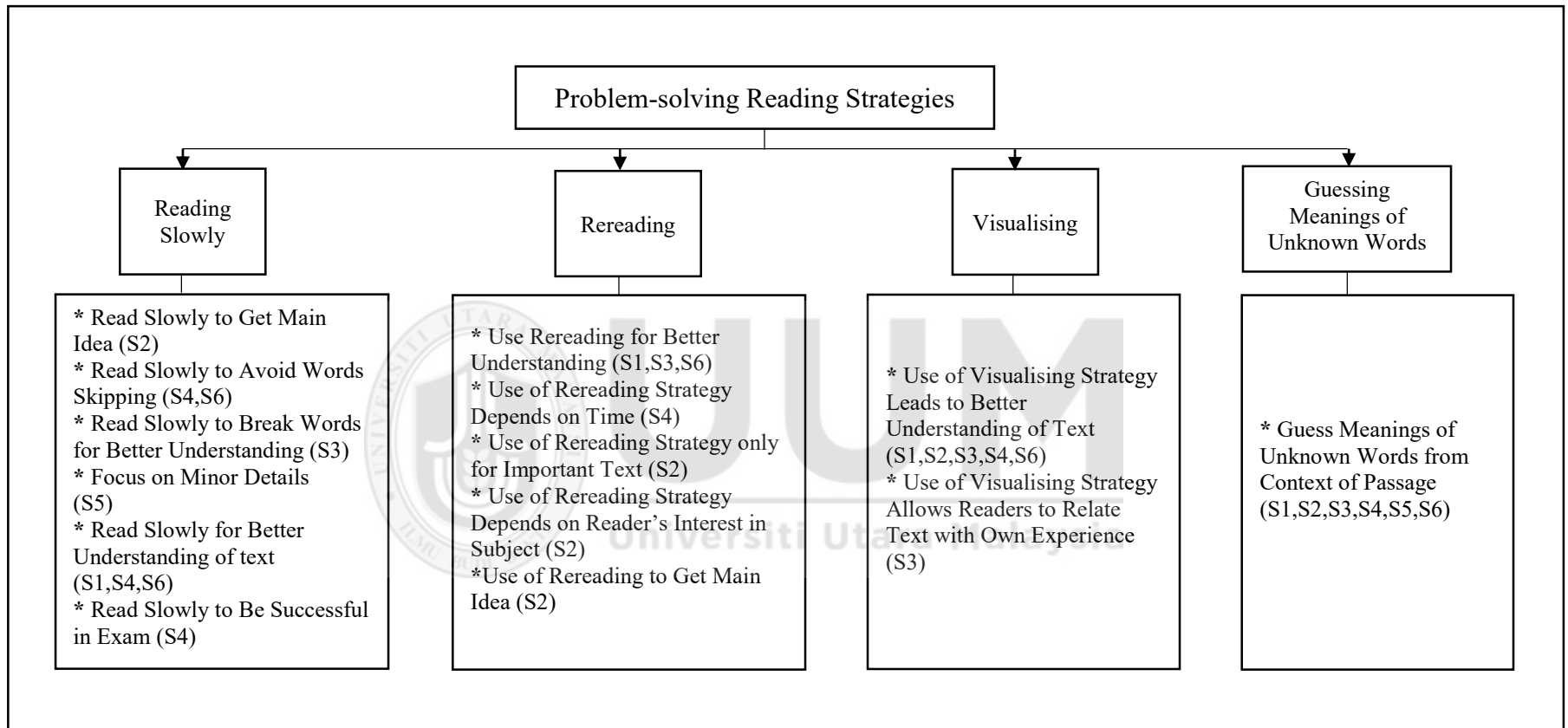


Figure 4.14. Summary of the Findings of Problem-solving Strategies

4.7.2.3 Influence of Support Reading Strategies

‘Support strategies’ is the third type of metacognitive reading strategies. Respondents shared their perspectives regarding the influence of support reading strategies on reading comprehension performance. They were specifically asked about four support reading strategies including, notes-taking, using reference materials, underlining the text, and translating from L2 to L1. Summary of the findings are shown in Figure 4.15.

First of all, regarding the first support strategy (i.e., notes-taking), various reasons of using this particular strategy were reported by the respondents that eventually affected their reading comprehension (refer to Figure 4.15)

S2 and S3 stated that they only used notes-taking strategy when they encountered something important while reading. They stated that taking notes of important details affected their reading comprehension. S2 stated,

“I don’t take notes usually. I take notes rarely when it’s most important. For instance, if I read any concept or difficult word, I take notes of it. So that I can understand it better when I read it next time.”

Similarly, S3 stated,

I take notes only if something important comes across me. It helps me to remember different words or concepts (S3).

Another reason of note-taking reported by the learners was to refer to the notes later when needed. They shared that the note-taking strategy helped them in a way that when they read

something later, written notes would help them to understand the text in a better way. S1, S3 and S4 stated:

Yea, I take notes sometimes. If I don't take notes, I will forget many important details when I read it next time and that would be bad for my comprehension (S1).

...I can use these notes when I am in the car and traffic gets jammed. So, I could have a look at these notes and understand everything quickly (S3).

I take notes regarding that word... So, when I go back to home, I try to understand them (S4).

Additionally, S5 claimed that he used this strategy when the topic was of his interest. He believed that interest in a topic would instigate him to take notes and eventually note-taking would affect his reading comprehension.

Actually, it depends on the topic. If I read the topic and it's about what I love so much, then actually I will take notes and write some of the ideas. I understand it more when I write my ideas about it. (S5).

Moreover, S4 indicated that he used this strategy specifically when he read long words in a text.

... if I doesn't understand any word or like there's a long word like more than 10 letters, then I take notes regarding that word. Because I know these words will come in exam and If I don't know their meanings, how can I understand the whole passage (S4).

Lastly, S1 shared that he took notes in his native language (Arabic) and it really helped him in reading comprehension. He stated,

“Sometimes, I also take notes in Arabic to remember because it is easy to understand something if I relate it to Arabic”.

Secondly, regarding the second global reading strategy (i.e., using reference materials), the respondents revealed their viewpoints related to the influence of using this particular strategy on their reading comprehension. The majority of the respondents (i.e., S3, S4, S5, & S6) used dictionary as a reference material. They claimed that dictionary usage improved their reading comprehension. S5 and S6 shared their views as follows:

... if I read some unknown word, I use dictionary to get the meaning of that word. Once I am clear with meaning, I get everything. (S5).

When I was in Ireland, I had dictionary with me every time. So, that helped me in understanding written passages a lot (S6).

S6 shared that if one consulted a dictionary instantly, when one came across an unknown word while reading, the meaning of that word remained in his memory for a long time and eventually it would help him in reading comprehension later. He stated,

...when you know the meaning of some word at the time when you are reading something, then it will remain in your mind forever and if that word is used in any other passage you can get understand what the writer wants to convey (S6).

Thereafter, regarding the third support reading strategy (i.e., underlining the text), respondents shared various perspectives related to the usefulness of this technique in improving reading comprehension. They had two main reasons of underlining the text while reading. For instance, S3 and S4 believed that the main purpose of underlining the text was to easily identify the important vocabulary later and they claimed that getting the meanings of difficult words would improve their reading comprehension.

...and if you underline those words at that time then it's easy to look for the important words later. Important words are very useful for understanding the passage (S3).

...underlining them (words) helps me in a way that I search for their meaning later after the class...important vocabulary is necessary to understand something. That is why I try to underline it so that I don't face any hurdles in understanding in future. (S4).

The second purpose of underlining the text stated by five respondents (i.e., S1, S2, S3, S4, & S5) was to refer to underlined content when needed. They claimed that referring back to the already read content would enhance their reading comprehension. For instance, S2 and S5 explained,

I underline them to refer back to them later. When I read them again after knowing their meaning I get the whole text easily (S2).

I underline difficult words ... and also later whenever I get time I read it again and again to get its meaning. (S5).

Last but not the least, regarding the fourth support reading strategy (i.e., translating from L2 to L1), respondents shared various perspectives related to the influence of this technique

on their reading comprehension. Four learners (i.e., S1, S3, S4, & S5) indicated that they translated from English to Arabic to understand the text in a better way. For instance, S5 stated, “I only translate when I don’t get the meaning of the sentence or word.” Similarly, S1 stated, “I translate from English to Arabic because it’s easier to understand the text.” Additionally, S3 and S4 explained,

Yes, I always translate from English to Arabic because it’s gonna be easy to understand [Pause] the thought. (S3)

Of course! In our school we didn’t study English properly. So, from the very beginning up till now, I translate from Arabic to English to get the proper meaning of passage. (S4)

Another important finding regarding the usage of translation strategy was revealed by S1 and S5. Both of them asserted that the decision on whether to translate the text from English to Arabic depended on the situation.

Sometimes, I translate from English to Arabic because it’s easier to understand the text. However, sometimes there are some words in English which we can’t translate in Arabic and I leave them as they are. In this case, I can still understand the text (S1).

Yes, I translate from English to Arabic but not every time. I only translate when I don’t get the meaning of the sentence or word. And I have never tried to translate from English to English (S5).

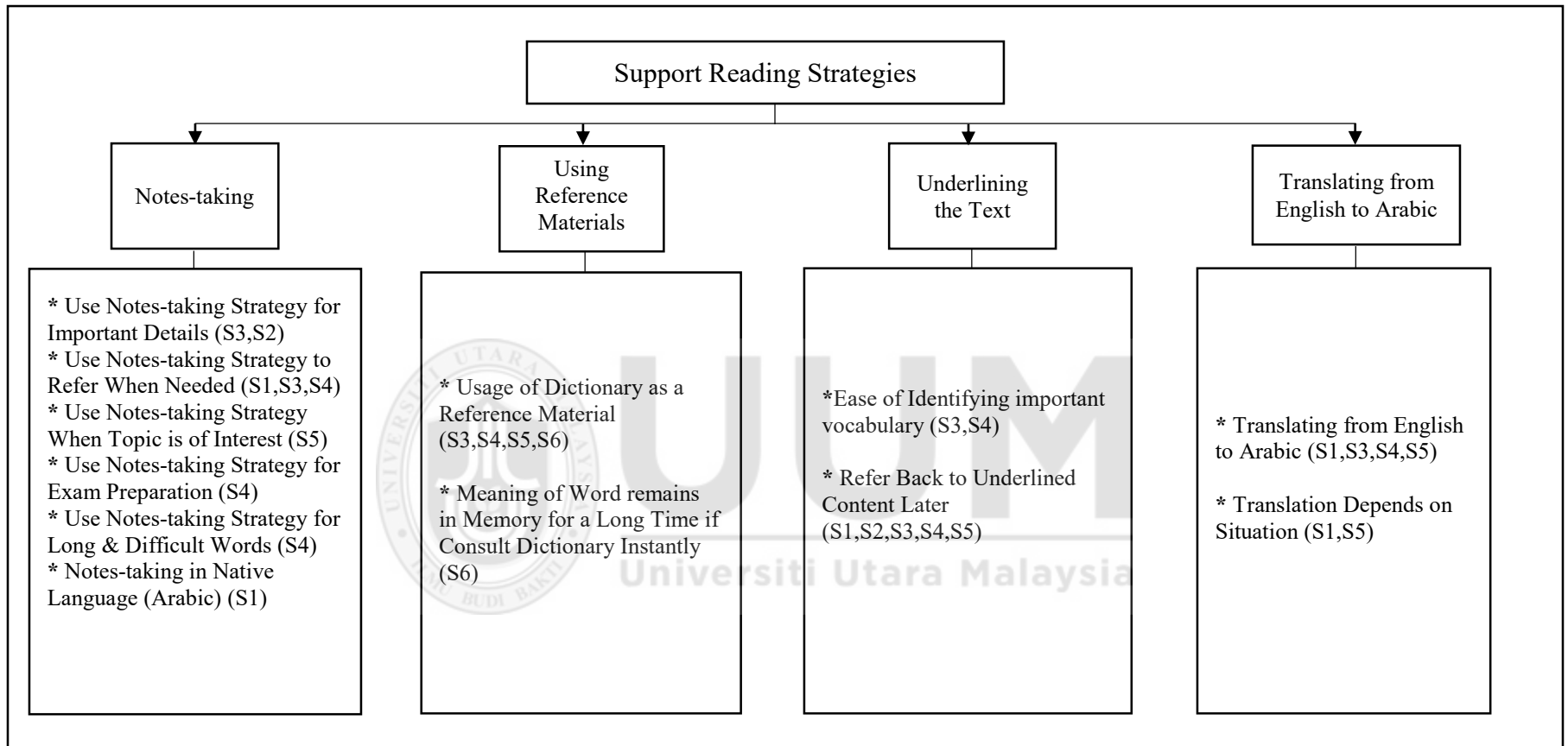


Figure 4.15. Summary of the Findings of Support Strategies

4.8 Discussion of Qualitative Data

This section discusses the findings obtained to answer research question number ten, that is, what are the Saudi EFL learners' perspectives on the influence of self-efficacy sources and metacognitive reading strategies on their reading comprehension?

4.8.1 Discussion of Self-efficacy Sources

Self-efficacy has four hypothesised sources (i.e., mastery experience, vicarious experience, verbal persuasion, and physiological state). In the coming sections, Saudi EFL learners' perspectives regarding the influence of self-efficacy sources on reading comprehension are discussed.

4.8.1.1 Discussion of Mastery Experience

The respondents revealed that 'the usage of reading strategies' was one of the factors that affected their reading comprehension positively. This factor was identified by two respondents (i.e., S1 & S4). For example, S1 shared his experience of using a particular strategy (i.e., rereading) affected his reading performance positively. Moreover, S4 mentioned some of the reading strategies (i.e., skimming, scanning and using background knowledge) that improved his reading comprehension. The respondents might have improved their reading comprehension due to the fact that the respondents of the current study were studying in the second semester of PYP, which particularly focuses on teaching metacognitive reading strategies to assist the learners in reading comprehension. Several studies agreed with the current study's findings which indicated that usage of reading strategies improved reading comprehension (Abu-Snoubar, 2017; Ahmadian & Pasand,

2017; Alfangca & Tamah, 2017; Azmuddin et al., 2017; Dündar, 2016; Meniado, 2016; Mudra, 2018; Poole, 2010). Harvey and Goudris (2000) asserted that reading strategies are indispensable for the effective comprehension as they assist the reader in understanding the written text. For that reason, successful L2 readers employ reading strategies frequently, whereas unsuccessful L2 readers rely mostly on word identification and word-for-word translation (Auerbach & Paxton, 1997).

‘The role of a reading teacher’ was also identified by three respondents (i.e., S3, S4, & S5) in improving their reading comprehension. They admitted that teachers played a substantial role in the past regarding their learning in a reading comprehension skill. This finding is in line with numerous studies (Bryant, 2017; Butz & Usher, 2015; Usher, 2009). For instance, Bryant (2017) found that teachers played a substantial role in boosting learners’ self-efficacy and eventually performance. Likewise, in Butz and Usher’s (2015) study, it was revealed that learners performed well due to teachers’ assistance and positive attitude towards them. Similarly, Usher (2009) found that teachers’ support was crucial for learners’ academic accomplishments. Taylor, Pearson, Clark and Walpole (2000) affirmed that good teachers are the reason of improving reading performance of the learners as they teach reading strategies and also they give importance to reading. Furthermore, Dolezal, Welsh, Pressley, and Vincent (2003) maintained that excellent English teachers devote a considerable amount of energy and time in augmenting learners’ enthusiasm to accomplish better reading results.

The current finding could be attributed to several reasons. For instance, the respondents of the current study might have attended International schools. International schools in KSA recruit native English speaking teachers. The native English speaking teachers might have used appropriate methodology to teach reading skills, which eventually affected the reading comprehension of Saudi EFL learners. Another reason of the current finding could be due to the fact that the respondents of the current study were studying in the second semester of the Preparatory-Year-Programme (PYP) at the time of data collection. They might have been taught by very good teachers in the first semester of PYP. Thus, their reading comprehension might have improved due to good PYP teachers.

Last but not the least, ‘the role of topics of interest’ was reported as another factor which improved the reading comprehension of the respondents. Role of topics of interest was studied in past studies and the findings revealed that it is a vital predictor of reading comprehension achievement (Asgari, Ketabi, & Amirian, 2018; Ebrahimi & Javanbakht, 2015; Eidswick, 2010; Sadeghpour, 2013). Schiefele (1998) asserted that the topic of interest is essential for better comprehension due to the reason that it assists a reader to understand the phenomena in the text more deeply. Furthermore, it is a universal phenomenon that if the reading material is of a reader’s interest, he/she would enjoy while reading it and consequently understand it better. Another viewpoint regarding the effect of the topic of interest with learning achievement was presented by Asgari, Ketabi and Amirian (2018). They affirmed that enhanced interest influences learners to exert more effort in learning, which consequently enhances their learning performance.

The findings of positive mastery experience were discussed above. In the coming paragraphs, findings of negative mastery experience are discussed in the light of previous relevant literature.

The respondents identified ‘substandard school education system’ as an important factor related to negative mastery experience that deteriorated their reading comprehension. This finding is supported by several past studies which indicated that reading proficiency level of the Saudi school learners was poor when they completed their school education (Alrabai, 2016; Al-Seghayer, 2014; Ismail, 2014; Rahman & Alhaisoni, 2013). Several explanations were found in the previous literature regarding the role of substandard school education system in the Kingdom of Saudi Arabia (KSA) in poor reading comprehension performance of learners.

Firstly, Saudi learners are exposed to learning of English language very late in their educational career. They start learning English from the 6th grade (Al- Hazmi, 2003; Al-Sadan, 2000; Alsaif, 2011; Al-Sughaer, 2009; Mahboob & Elyas, 2014; Sheshsha, 1982; Zaid, 1993). Late exposure towards English can be considered as a major factor for their poor reading performance. Secondly, little amount of time is apportioned to the subject of English in the curriculum of the government schools. The primary level learners study English, two lessons a week and each lesson is of 45-minutes duration, whereas, the intermediate and secondary level learners study English in four (45-minutes) lessons a week (Al-Sadan, 2000). Little amount of time allocated to teaching of English language is also considered as a major cause of poor reading performance. Lastly, the syllabus of

English is not up to the mark. Mahboob and Elyas (2014) had reviewed the English textbook being taught in Saudi schools named, 'English language for Saudi Arabia: 1st year secondary term 1: Student's book.' It was revealed that several linguistic features didn't match Standard English and many of them were misused. Further, Rahman and Alhaisoni (2013) were of the viewpoint that selection of English textbooks in schools and universities of KSA by higher education authorities and syllabus designers is not appropriate. Therefore, inappropriate syllabus can also be considered as one of the causes of poor reading performance of the Saudi EFL learners.

The second factor related to negative mastery experience that was found to have a negative impact on reading comprehension of respondents was 'incompetency of their English teachers'. In other words, respondents believed that in their past academic career, their teachers did not pay attention on developing their reading skills which hindered their reading comprehension development. This finding regarding the incompetent English teachers in Saudi schools is supported by several past studies. These studies stated that Saudi school teachers don't have enough knowledge and also the teaching methodology adopted by them in teaching English is not appropriate (Al-Jarf, 2008; Alsaif & Milton, 2012; Fareh, 2010; Rabab'ah, 2005; Zainol Abidin, Pour-Mohammadi, & Alzwari, 2012). Therefore, the findings of the current study and past literature reveal that Saudi English teachers' knowledge and teaching methodology are potentially one of the main causes of poor English reading comprehension of Saudi EFL learners.

In addition, it was also revealed that learners' reading comprehension was negatively affected by their 'poor vocabulary'. The finding is supported by past studies (Al-Mahrooqi, 2012; Birch, 2014; Nezami, 2012). This finding could be due to their social environment. Saudi EFL learners use their mother tongue, i.e., Arabic in everyday life. Thus, due to lack of exposure to English language, they are unable to gain English language vocabulary which in turn affects their reading comprehension. Another possible reason for this finding could be usage of social media in Arabic language. Saudi learners use social media excessively. If they use social media in English language, they can learn a lot of English vocabulary which consequently can improve their English reading comprehension. One more plausible reason could be the wrong way of learning new English vocabulary. They might have memorised the new English vocabulary without knowing the context of specific words. In other words, they might have learned the words by heart without knowing their context. Sternberg (1987) claimed that new vocabulary should be learned by taking context into account. Otherwise, the learner cannot retain new vocabulary in the brain for a longer period of time.

Vocabulary plays a significant role in understanding of the written text. The decoding of the written text is inevitable to fully understand the text (Adams, 2004; Alderson, 2000; Day, Bamford, Renandya, Jacobs & Yu, 1998). Incapability to identify words and existence of a large number of unknown words in a written text could obstruct the comprehension process (Chall, 1987; Curtis, 1987; Nation, 2001). Also, Beck, Mckeown and Omanson (1987) maintained that in order to overcome the hurdles in the process of reading comprehension, a reader must have good vocabulary knowledge.

‘Unfamiliarity with the topics’ was identified as another factor related to negative mastery experience that impacts reading comprehension negatively. This finding is supported by numerous past studies (Fareh, 2010; Horiba & Fukaya, 2015; Lee, 2007; Pulido, 2007; Zhao, Guo, & Dynia, 2013). Readers who contain more relevant knowledge about any particular topic while reading a text have a tendency to comprehend the text in a better way. Relevant knowledge about a certain topic assists cognitive and semantic processing at several stages including, triggering related semantic information, producing appropriate descriptive and elaborative interpretations, and making connections between novel information presented in the text and past knowledge in reader’s brain in a significant way (Cook, 2005; Coté, Goldman, & Saul, 1998). One possible reason for the current finding could be lack of topics related to their culture in their English syllabus. Fareh (2010) claimed that EFL Arab learners have to read English books in their syllabus which contain irrelevant topics and those topics have no relation to Arab culture. Consequently, the learners lose interest and their comprehension gets affected. He further suggested that more examples related to their native culture ought to be added to the English language syllabus being taught in Saudi educational institutions.

4.8.1.2 Discussion of Vicarious Experience

Regarding positive vicarious experience, the first factor that was found to have a positive impact on reading comprehension was ‘getting motivation from peers’. This finding is consistent with several past studies (Butz & Usher, 2015; Relich, Debus, & Walker, 1986; Schunk, 1989, 1991; Usher, 2009; Weber & Hertel, 2007; Williams, 2017; Zimmerman & Ringle, 1981). A possible conjecture behind the current finding is that Saudi EFL learners

come into PYP with the aim of pursuing higher studies in prestigious institutions in Saudi Arabia. Not only to get a place in higher educational institutions, but also to be successful there, one needs to be good at reading comprehension skill. Therefore, they gain motivation from each other's good reading performances which consequently improves their reading comprehension. Schunk (1991) affirmed peer models play a significant role in increasing or decreasing the motivation among learners. He further elaborated that if peer models perform a task confidently and persistently, consequently learners' motivation to perform that particular task would increase and vice versa. Additionally, Schunk and Hanson (1985) conducted an experimental study and concluded that learners who observed models had higher learning motivation than learners who did not observe models at all. However, numerous researchers contended that models should be at the same level of competence as of the observer for higher gains in observer's motivation (Collins, 2000; Major, Munkes, & Diehl, 2003; Weber & Hertel, 2007).

Regarding positive vicarious experience, the respondents identified another factor (i.e., seeking help from peers) which had a positive impact on their reading comprehension. In other words, when the learners observe a positive or successful reading performance of their peers, they seek help from them in order to improve their own reading comprehension. Some qualitative studies also found that learners seek help from their peers to improve their performance (Usher, 2009; Williams, 2017). Usher (2009) confirmed that in his study, brilliant learners were asked for help by their classmates quite often to elevate their performance. Also, in Williams' (2017) study, a respondent shared that he and his friend helped each other which in turn improved his performance. This finding could be attributed

to their culture. Saudi culture is based on brotherhood and fraternity. In Saudi culture, people do not feel hesitant to seek help. Therefore, this factor could be one of the potential reasons of their reading comprehension improvement. Help seeking is a crucial self-regulatory approach that learners employ for effective learning (Karabenick & Sharma, 1994; Newman, 1994; Zimmennan & Martinez-Pons, 1988). Unsurprisingly, learners confront several difficulties in their academic life and need help. In such circumstances, they tend to seek others' help to solve their problems and carry on the learning process (McCaslin & Good, 1996). Moreover, Johnson and Johnson (1989, 2005, 2009) introduced a term, 'Promotive interaction'. It is characterised as individuals assisting and facilitating other learners to accomplish academic tasks. They considered it crucial for conducive learning environment.

Regarding positive vicarious experience, another factor that was found to have positive influence on reading comprehension was 'competitive environment among learners'. The learners shared that whenever they observed other peers performing well in reading, they started working hard to improve themselves as well. This finding is in line with past literature (Burguillo, 2010; Usher, 2009). Usher (2009) found that when the learners observed other peers performing well, consequently, they started working hard with great will power. Likewise, Burguillo (2010) discovered that competitive environment had a positive effect on the performance of university learners. Many researchers agree that competitive environment plays a crucial role in enhancing the performance in any academic task (Burguillo, 2010; Harter, 1996; Midgley, Anderman, & Hicks, 1995; Usher, 2009). Furthermore, Williams (2017) found that most of the respondents in his study were

on the same level of skill and competence, thus, the learners always compared them with their peers and felt good about their own performance. Williams' finding is in line with Schunk and Hanson (1985), in which they affirmed that while peer comparison, self-efficacy and performance would be elevated if the level of all the learners is the same. Additionally, Ediger (1996) used two terms (i.e., cooperation and competition) among learners and considered them vital for effective learning outcomes. He affirmed that there should be a balance between the two to achieve better academic results. However, Ames and Ames (1984) believed that competition among learners induces the development of performance goals rather than learning goals. Furthermore, under the pressure of competitive environment, learners perform significantly well but they neglect competency and task mastery. Whereas, when the learners work freely in the absence of competitive environment, they focus more on competence development and task mastery.

The findings of positive vicarious experience were discussed above. In the coming paragraphs, findings of negative vicarious experience are discussed in the light of previous relevant literature.

Regarding negative vicarious experience, the first factor that was found to have a positive influence on reading comprehension was 'peer tutoring'. In other words, respondents claimed that whenever they observed someone in their class performing badly in reading comprehension, they felt sympathetic towards them and offered their assistance in terms of teaching reading comprehension skills to them, which consequently improved their own reading comprehension performance. This finding could be attributed to Saudi culture of

helping others. The whole society is woven together due to cultural and religious reasons. Generally, Saudi people are known for their generosity and kindness towards others. Therefore, due to this reason the respondents of the current study taught reading comprehension skills to their peers which subsequently improved their own reading comprehension skills.

Previous literature also indicated that peer tutoring influenced one's own performance (Chase, Chin, Oppezzo, & Schwartz, 2009; Hood, Lemaignan, & Dillenbourg, 2015; Veletsianos & Russell, 2014). Miller, Topping and Thurston (2010) defined peer tutoring as a phenomenon in which a more knowledgeable individual assists in learning of less knowledgeable individual. Chase et al. (2009) found that learners put a large amount of effort to teach other peers, whereas, they did not try too hard to study for themselves. They further explained three main reasons of putting more effort in teaching other peers. Firstly, learners are egoistic about their teaching skills. Thus, they teach well to avoid any humiliation. Secondly, they want to improve the knowledge of their peers or students. Lastly, they put more effort in teaching peers due to a sense of responsibility. They consider themselves responsible for successes and failures of their peers or students. Thus, from the aforementioned reviewed literature, it can be concluded that Saudi EFL learners improve their reading comprehension by means of peer tutoring.

Another factor related to negative vicarious experience, that influenced the reading comprehension of the respondents was 'schadenfreude'. The term, 'schadenfreude' means to feel happy on others' failures. In the previous literature, some studies had identified this

particular factor (Kudi & Mori, 2015; Usher, 2009; Williams, 2017). For instance, Kudo and Mori (2015) found an unexpected finding. It was revealed that some students had increased their self-efficacy level as well as performance after observing other students' bad performances. Similarly, in Usher' (2009) study, an interviewee shared that she always felt great happiness in outperforming rest of her classmates. Likewise, Williams (2017) found that students felt happy after outperforming their peers. Schadenfreude is very much associated to envy, and it tends to happen to an individual when he/she observes someone who is advantaged or fortunate, faces a misfortune (Heider, 2013; van Dijk, Ouwerkerk, Goslinga, Nieweg, & Gallucci, 2006). Thus, in the current study's context, some of the Saudi EFL learners felt happy on others' failure in reading because those learners who faced failure were advantaged and fortunate in terms of reading.

4.8.1.3 Discussion of Verbal Persuasion

Regarding positive verbal persuasion, the first factor that was found to have a positive impact on reading comprehension was 'getting confidence'. S1, S2, S4, S5 and S6 affirmed that good remarks from teachers or parents increased their confidence in reading and eventually their reading comprehension improved. This finding could be due to the reason that PYP teachers might have dealt with their students professionally. The majority of the PYP teachers are highly qualified and professionally trained. It is in their training to encourage their students and make them confident which consequently improves the reading comprehension performance of their students. On the other hand, it is a natural phenomenon that if the learners are not appreciated, they would feel discouraged and subsequently their performance would get affected negatively and vice versa. This finding

is in line with several past studies which indicated that positive feedback was the source of gaining confidence (Butz & Usher, 2015; Fong & Krause, 2014; Usher, 2009). One of the interviewees in Butz and Usher's (2015) study shared that she felt extremely confident after she was praised by her teachers and consequently, she performed well in subsequent exams. Similarly, Fong and Krause (2014) found that encouragement from teachers gave confidence and immense boost to the learners in performing well in future.

Lastly, in Usher's (2009) study, the majority of the interviewees revealed that their confidence level was elevated whenever they heard words of encouragement from their teachers and parents. Aforementioned studies support the fact that positive feedback had a positive influence on the performance of the learners. However, feedback ought to be authentic and convincing. Penny Ur (1996), a well-known EFL teacher, cautions that the positive feedback passed by the teacher can be devaluated by the learner if it is used excessively. Sometimes, the learners assume that excessive positive feedback is not genuine and consequently they don't get stimulated by it. As a matter of fact, clichéd and unauthentic feedback can instigate annoyance among learners (Penny Ur, 1996). Similarly, mediocrity should not be appraised or else the learners would get used to the average performances and would not push themselves harder towards excellence (Penny Ur, 1996). Thus, the current study's findings and previous literature indicated that Saudi EFL students' confidence in reading comprehension increased due to positive feedback from teachers and peers which affected their reading comprehension consequently.

Regarding positive verbal persuasion, the respondents identified another factor (i.e., happiness) which had a positive impact on their reading comprehension. In other words, respondents indicated that whenever they received positive feedback from their teachers related to reading, they became happy and consequently their reading comprehension were influenced positively. The current finding could be attributed to the lively and activity-based environment of PYP. In an activity-based environment the teacher involves the students in different reading comprehension tasks and constantly provides his feedback. This feedback plays a vital role in Saudi EFL learners' happiness and consequently, they perform better in reading comprehension tasks.

Mahfoodh and Pandian (2011) found that the students felt happy and encouraged after receiving positive comments from their teacher which affected their performance eventually. Likewise, Trockel, Barnes and Egget (2000) found that the high level of happiness affects academic performance positively. The present finding is also consistent with Achor (2011) who conducted a study on happiness and invented a term called 'happiness advantage'. This term implied that happiness and positivity both act as a fuel to reach one's intended goal.

The findings of positive verbal persuasion were discussed above. In the subsequent paragraphs, findings of negative verbal persuasion are discussed in the light of previous relevant literature.

Regarding negative verbal persuasion, the first factor that was found to have a positive impact on reading comprehension was ‘embarrassment’. In other words, respondents indicated that teachers embarrassed them in front of classmates and that affected their reading comprehension performance negatively. The respondents might have felt embarrassed while reading aloud in front of peers and teacher. It might be possible that the teacher had corrected the respondents directly. According to universal pedagogical principles, the teacher should correct the mistakes of students indirectly, hence the students would not feel embarrassed (Teba, 2017). This finding is in line with Ashcraft and Moore (2009) study. They found that embarrassment from teacher’s side is extremely detrimental for the students. They further explained that embarrassment faced by the students caused anxiety and that anxiety consequently affected students’ performance negatively. Martin (1987) provided several causes of students’ embarrassment from teachers’ side including, deficiency of patience in teachers, teachers’ cold attitude, holding grudges against students, considering mature students as kids, being egoistic, etc. As a consequence of the aforementioned actions from teachers, students become less motivated towards their study and their performance gets negatively affected eventually.

Regarding negative verbal persuasion, the respondents identified another factor (i.e., remaining absent from class) which had a negative impact on their reading comprehension. The respondents might have mentioned this particular factor due to the reason that they might have faced negative feedback from teachers in previous classes and they might be afraid of facing that uncomfortable situation again. The current finding agrees with Martin’s (1987) study. He found that teachers’ negative feedback in front of the class made the students feel like quitting the class or school, as a result of which their performance

was affected. Furthermore, Frey and Fisher (2008) found after interviewing middle school students that humiliation is the cause of students' dropout from schools and also it causes lack of attendance of students in that specific class. It is obvious from the findings of the aforementioned studies that due to lack of attendance and dropouts from school, students' academic performance gets affected negatively. Thus, in the current study, the respondents' reading comprehension performance might have been affected negatively due to lack of attendance in reading class.

Last but not the least, regarding negative verbal persuasion, the respondents identified a factor (i.e., negative effect on mental health) which had a negative impact on their reading comprehension. This finding is supported by several researchers (Frey & Fisher, 2008; Kidger, Araya, Donovan & Gunnell, 2012; Martin, 1987). Frey and Fisher (2008) revealed that negative feedback causes humiliation which leads to suicide in some cases. Likewise, in Martin's (1987) study, respondents indicated that negative comments from teachers made them angry and also made them feel 'left behind' which affected their performance in that particular subject. Lastly, Kidger et al. (2012) conducted a systematic literature review of 35 studies and concluded that teachers' support has a strong relationship with students' emotional health, which affects their academic performance consequently. Leafgran (1989) contended that students having good emotional health have more chances to thrive in college and vice versa. Thus, from the above mentioned literature, it is concluded that emotional health plays an important role in reading comprehension performance of Saudi EFL learners. Therefore, the teachers should create a conducive environment which involves positive feedback for the learners. As a consequence of

positive feedback, the Saudi EFL learners would participate in reading activities with confidence and perform better eventually.

4.8.1.4 Discussion of Physiological State

Regarding physiological state, the first factor that was found to have a negative impact on reading comprehension was 'lack of time'. In other words, the respondents indicated that they were not given enough time to attempt reading comprehension exercises by their teachers which consequently resulted in lack of understanding of text. The probable reason behind this finding could be anxiety. They might have become anxious due to shortage of time and consequently could not concentrate on the reading passage. This finding is supported by past studies (Aydin, 2007; Ohata, 2005). Aydin (2007) found several factors that were responsible for exam anxiety which eventually affected the performance. 'Lack of exam time' was one of them. Also, in Ohata's (2005) study, exam takers felt nervous due to shortage of exam time which proved detrimental to their performance. Likewise, Alshammari (2013) conducted a study on Saudi university students to determine the effect of time constraint on reading comprehension performance. Findings revealed that the group which was awarded most time had outperformed other two groups who were given less time to complete the test.

Several researchers believed that extra time should be allotted to those readers who suffered from learning disabilities. Disabled readers are those who require more time to read and process the written material as compared to normal readers. The researchers believe that extra time will provide a chance to weak readers to at least attempt as many questions as

they like to compete with normal readers. Consequently, their reading comprehension performance will get better (Geary & Brown, 1990, Kail & Hall, 1984; Stanovich, 1986). Since Saudi learners are learning English as a foreign language, they require more time to process ideas in their mind. Therefore, more time ought to be given to them while they attempt comprehension exercises or exams.

‘Lack of preparation’ was identified as another factor which influenced the reading comprehension of Saudi EFL learners negatively. In other words, learners reported that lack of preparation for a reading exam produced anxiety among them and consequently, anxiety affected their reading comprehension. The possible reason of lack of preparation for reading comprehension exam could be due to the fact that Saudi EFL learners have numerous other subjects to focus on, e.g., Mathematics, Science etc. Thus, they might have not enough time left to prepare for reading comprehension exam. As a consequence of lack of preparation, their reading comprehension might have been affected negatively.

Another probable reason of this finding could be attributed to the reading habits of Saudi EFL learners. They do not read enough reading material. A survey was conducted on the reading habits of the Saudis. The survey revealed that 85% Saudis read only one book a year (Al-Roomy, 2013). The current finding is consistent with the findings of Bonaccio, Reeve, and Winford (2012). Bonaccio et al. (2012) found that lack of exam preparation caused anxiety among students and subsequently, their performance was affected negatively. Pressley et al. (1997) mentioned that students often don’t reach their potential in preparing for exams because they feel anxious regarding exams. According to Miller

(1956), a normal human has a limited information storage capacity. Thus, in context of students, they store irrelevant information related to anxiety before exam preparation, due to which their brain does not store much information relevant to exam, which consequently, affects their academic or exam performance (Tobias, 1979, 1985). Thus, it can be speculated that Saudi EFL learners' lack of preparation for reading exams was due to anxiety, which affected their reading comprehension.

Regarding physiological state, the respondents identified another factor (i.e., difficulty of passage) which had a negative impact on their reading comprehension. The probable reason behind this factor could be that Preparatory-Year-Programme (PYP) teachers make difficult reading comprehension exams due to the competitive nature of the programme. They might want to differentiate between good and poor readers. Therefore, the poor readers might have faced problems in understanding the difficult passages. The present finding is consistent with findings of numerous past studies (Lou, 2010; Pajares, 2006; Usher, 2009). In Usher's (2009) study, an interviewee shared that he always felt anxious whenever he came across something new and difficult in class which deteriorated his performance. Likewise, Lou (2010) found that the majority of the students in his study felt extremely anxious whenever they were given a task of reading any article and that anxiety affected their performance in reading comprehension.

Another possible reason of the current finding could be the fact that Saudi students start learning English in sixth grade. Therefore, due to late exposure towards English language, they face difficulties. The justification of the present finding was explained by several

reading researchers (Pajares, 2006; Pressley et al., 1997). Pressley et al. (1997) affirmed that college level students are not outstanding readers generally. He further exclaimed that in the majority of the college courses, the books are above the level of the readers. Thus, even the brilliant readers in the class face difficulties in comprehending the content. According to Pajares (2006), educational tasks should be assigned according to the level of the learners, otherwise, learners' performance would be affected negatively.

'Fear of failure' was identified as another factor which influenced the reading comprehension of Saudi EFL students negatively. The plausible reason of this finding could be their parents' expectations from them to perform well. They might have overthought about parents' expectations which might have caused anxiety among them and consequently their reading comprehension might have been affected negatively. Another possible reason of the current finding could be their own objectives of going to prestigious institutions to pursue higher education. Thus, if they fail in reading comprehension exams in PYP, they would not be able to go to higher education institutions. For that possible reason, they might have become anxious and consequently their reading comprehension was affected.

This finding is consistent with numerous studies (Bandura, 1997; Batiha, Noor, & Mustaffa, 2014; Fong & Krause, 2014; Lou, 2010; Martin, 2010; Usher, 2009). Martin (2010) indicated learners face various hurdles which affect their academic performance including, fear of failure, anxiety, and pessimism. Bandura (1997) also indicated that one of the main causes of poor academic performance is worrying excessively about one's

performance. Likewise, in a study conducted by Fong and Krause (2014), an interviewee shared that he had a worry regarding failure in exams and he kept on thinking about it constantly. Furthermore, he mentioned that fear of failure is one of the major hurdles in performing well. It was indicated by researchers that learners adopt performance-avoidance goals due to fear of failure, which can cause anxiety among them and eventually they perform poorly (Elliot & Harackiewicz, 1996; Elliot & McGregor, 2001). Thus, it can be speculated in light of above mentioned justifications that Saudi EFL learners' reading comprehension performance was affected negatively due to fear of failure in a reading comprehension exam.

Last but not the least, regarding physiological state, the respondents identified a factor (i.e., lack of focus while reading) which had a negative impact on their reading comprehension. The respondents' lack of focus in reading could be attributed to the possibility that Saudi young population stays awake till late night. As a consequence, when they perform reading comprehension activities in class or exam, they cannot concentrate on the text properly and their comprehension gets affected eventually. Another possible reason could be excessive usage of mobile phones while reading in classrooms. Their attention gets diverted towards mobile and consequently their comprehension gets affected. Usher (2009) maintained that lack of concentration is one of the major reasons of poor reading comprehension. Similarly, in Kumaraswamy's (2013) study, an interviewee shared that one of the problems while reading is maintaining the concentration which consequently affected his reading comprehension outcome. LeBerge and Samuels's (1974) theory regarding automaticity of information processing declared that concentration of the reader while reading is the key

component of comprehension process. Further, it affirmed that disabled readers cannot process the graphical and phonological information automatically. To decode and process a text, a significant segment of concentration is needed, causing little to concentrate at semantics level. Consequently, the reader's comprehension outcome gets affected negatively.

4.8.2 Discussion of Metacognitive Reading Strategies

There are three types of metacognitive reading strategies (i.e., global, problem-solving, and support strategies). In the coming sections, Saudi EFL learners' perspectives regarding the influence of aforementioned three metacognitive reading strategies on their reading comprehension are discussed.

4.8.2.1 Discussion of Global Reading Strategies

The respondents shared their viewpoints regarding the influence of four global reading strategies including, having a purpose before reading, using past knowledge, skimming, and guessing the content on their reading comprehension. Regarding the first strategy (i.e., having a purpose before reading), the respondents indicated that it improved their reading comprehension. This finding is consistent with previous studies (Mudra, 2018; Rajab et al., 2017; Xianming, 2007). Peregoy and Boyle (2000) affirmed that good readers read everything with a particular purpose in their minds. Furthermore, they claimed that based on their reading purpose, they employ various knowledge resources for better comprehension including, decoding capability, contextual knowledge, language

knowledge, knowledge regarding text structures, and comprehension-regulating capabilities.

Regarding the second global reading strategy (i.e., using past knowledge), the respondents revealed that it influenced their reading comprehension performance positively. This finding is consistent with previous studies (Genc, 2011; Mudra, 2018; Xianming, 2007). It was indicated in the previous literature that good readers employ past knowledge for effective comprehension. The reader will easily comprehend any topic if he/she is already familiar with it. In other words, the degree of comprehension depends upon the familiarity of the reader with the contents, entities, and events portrayed in the text (Anderson, 1994). Additionally, Perego and Boyle (2000) declared that good readers employ past knowledge related to a particular topic for better comprehension by visualising what they are aware of and not aware of about the topic at hand, envisaging about the coming content of the text, and producing questions in mind the written text might answer.

Regarding the third global reading strategy (i.e., skimming), the respondents disclosed that it affected their reading comprehension positively. This finding corresponds to the findings of past studies (Liu et al., 2014; Nation, 2009; Wu & Zhang, 2008). Pressley (2002) contended that skimming is crucial before reading a text. Skimming the text before reading allows a reader to know about the structure and length of the written material, where the essential elements of the written material are placed, and whether the written material is related to the reader's objectives (e.g., does it include the material the reader is looking

for?). In brief, skimming makes a reader cognizant of which segments of the text ought to be read in depth and which segments could be overlooked.

Last but not the least, the respondents of the current study asserted that the fourth global reading strategy (i.e., guessing the content) influenced their reading comprehension positively. This finding is in line with past studies (Afflerbach, 1990; Mudra, 2018; Paran, 1996; Xianming, 2007; Yoku, 2009). Paran (1996) views reading as an “activity involving constant guesses that are later rejected or confirmed. This means that one does not read all the sentences in the same way, but one relies on a number of words – or ‘cues’ - to get an idea of what kind of sentence (e.g. an explanation) is likely to follow” (p. 25). Afflerbach (1990) associates the reading comprehension process with hypothesis testing. He further elaborates that during the hypothesis testing the reader first makes a guess about the reading content. After reading the passage, he accepts or rejects the initial hypothesis. Usage of this strategy makes the comprehension process smooth as it allows a reader to get a general idea of the topic before even reading it. Additionally, he stated that this specific strategy is directly related to the background knowledge of the reader regarding a particular topic. Schema theory also confirms that activation of background knowledge improves the reading comprehension (Scarcella & Oxford, 1992; Zhang, 1989).

4.8.2.2 Discussion of Problem-solving Reading Strategies

The respondents shared their views related to the effect of four problem-solving reading strategies including reading slowly, rereading, visualising, and guessing the meaning of unknown words on their reading comprehension. Regarding the first strategy (i.e., reading

slowly), the respondents indicated that the usage of this particular strategy influenced their reading comprehension positively. This finding is in line with findings of past studies (Badley & Badley, 2011; Mikics, 2013; Newkirk, 2010). Afflerbach, Pearson, and Paris (2008) affirmed that when a reader reads a text, he self-questions himself whether he understands the text. If he does not understand it, he reads the text slowly to get the full meaning. Furthermore, with the passage of time, this particular strategy (reading slowly) becomes part of habit of the reader and the reader employs it whenever he requires it. As the Saudi students learn English as a foreign language (EFL), they have to read the text slowly in order to get the meaning of the text. Furthermore, they start learning English language in the sixth grade. Due to late exposure to English language, they face difficulty in reading the texts fluently. Thus, usage of strategies (i.e., reading slowly) assists them in comprehending the text.

Regarding the second problem-solving reading strategy (i.e., rereading), the respondents revealed that it influenced their reading comprehension performance effectively. This finding is in harmony with several past studies (Botsas & Padelia, 2003; Glenberg, Gutierrez, Levin, Japuntich, & Kaschak, 2004; Therrien, 2004). Walczyk, Marsiglia, Johns, and Bryan (2004) found that inefficient readers compete with efficient readers by using strategies like pausing, returning to already read text, rereading the text, and reading out loud. Also, (Baker & Brown, 1984) affirmed that readers employ rereading strategy to monitor their reading. In other words, they monitor whether they understand the text effectively. If they do not understand it effectively, they read it again for effective comprehension.

Regarding the third problem-solving reading strategy (i.e., visualising), the respondents disclosed that it affected their reading comprehension performance significantly. This finding is in harmony with the findings of previous studies (Bouvet, & Close, 2006; Verezub & Wang, 2008). Woolley (2010) affirmed that visualisation of the written content allows a reader to make a connection between visual and verbal material, which consequently leads to a better comprehension. Furthermore, it was declared that readers get more involved in the text when they integrate both verbal and visual processes since they can effectively employ their past knowledge. Therefore, effective comprehenders are imaginative readers who can effectively choose and arrange information from complicated texts (Block & Johnson, 2002; Gambrell, 2004; Kamhi & Catts, 2002).

Last but not the least, the respondents of the current study asserted that the fourth problem-solving reading strategy (i.e., guessing the meaning of unknown words) influenced their reading comprehension performance. This finding agrees with the past studies (Goodman, 2014; Kaivanpanah & Alavi, 2008; Meara & Nation, 2013). Laufer and Yano (2001) believed that whenever a reader confronts an unknown word, he/she has several choices; for instance (a) overlook the word, (b) find its meaning in a dictionary, and (c) guess its meaning from context. Majority of the past studies indicated that students guess the meaning of the word from context whenever they confront such a situation to improve their reading comprehension (Çetinavcı, 2014; Jun Zhang, 2001; Kaivanpanah & Alavi, 2008; Laufer 1997; Paribakht 2004; Qian 2004; Ying 2001). Haastrup (1991) asserted that when a reader employs this particular strategy he makes guesses of an unknown word by considering all on hand linguistic clues in combination with reader's general information

of the world around him, his cognizance of the textual context and his related knowledge of the language.

4.8.2.3 Discussion of Support Reading Strategies

The respondents shared their viewpoints regarding the influence of four support reading strategies including, note-taking, using reference materials, underlining the text, translating from L2 to L1, thinking in L1 and L2 while reading. Regarding the first support reading strategy (i.e., note-taking), respondents indicated that it improved their reading comprehension. This finding is consistent with previous studies (Chang & Ku, 2015; Rahmani & Sadeghi, 2011; Robinson et al., 2006). Several research studies also indicated that those students who take notes outperformed those who do not. Chang and Ku (2015) affirmed that by using a note-taking strategy, readers can improve their comprehension since it helps them to retain the read information for a longer time and also creates associations among chunks of information in the written material.

Regarding the second support reading strategy (using reference materials), the respondents revealed that it improved their reading comprehension performance considerably. This finding is in line with past studies (Prichard, 2008; Tono, 2012; Wright, Fugett & Caputa, 2013). Second language teachers have different viewpoints regarding the effect of dictionary usage on reading comprehension. Some of the instructors who teach language by grammar-translation methods (GTM) believe that excessive dictionary usage improves reading comprehension. On the contrary, some language instructors who believe in a communicative approach tend to consider that contextual guessing of new words leads to

better comprehension (Grabe & Stoller, 2004; Knight, 1994; Laufer, 1997). However, the views of teachers cannot be considered as authentic as an empirical research. The majority of the previous research indicated that dictionary usage could improve reading comprehension (Prichard, 2008). Furthermore, it was revealed that the readers tend to use electronic dictionary more often than printed one to assist their comprehension. (De Ridder, 2002; Koyama & Takeuchi, 2004).

Regarding the third support reading strategy (underlining the text), the respondents revealed that it influenced their reading comprehension performance substantially. This finding is in harmony with findings of the past studies (Cubukcu, 2008; Shang, 2010; Yoku, 2009). Wallace (1965) and Nist and Hoglebe (1987) explained usefulness of the underlining strategy in the light of 'von Restorff Effect theory'. This theory affirmed that when something is secluded from a homogenous environment, better recall of that secluded item that occurs in human mind. In the context of the underlining strategy, Wallace presumed that if a reader underlines important information in a text, that information will remain in his memory for a long time and consequently he can use that information whenever needed. Thus, it can be speculated that the readers who underline an important text can improve their reading comprehension by using the required information at the time of need.

Regarding the fourth support reading strategy (translating from L2 to L1), the respondents revealed that it improved their reading comprehension substantively. Cook (1992) affirmed that L1 cannot be eliminated from the minds of L2 users, thus, the interference of L1 while

L2 reading is an obvious phenomenon. Additionally, several past studies indicated the effect of this strategy (translating from L2 to L1) on reading comprehension (Seng & Hashim, 2006; Macizo & Bajo, 2004; Nazary, 2008). Kern (1994) found that cognitive translation from L2 to L1 while reading played a crucial role in the reading comprehension of the students. However, he also mentioned that translation can prove to be futile if it is performed in a word by word manner without the incorporation of meaning. On the whole, Kern (1994) declared that teachers and students should not consider the translation strategy as undesirable because he believed that it is an important source in assisting the comprehension of L2 texts.

4.9 Summary

This chapter presented the analysis techniques as well as the findings and discussion of the findings of both quantitative and qualitative phases. Thereafter, four research questions were answered by employing frequency statistics using SPSS 23.0. Next, the measurement model along with the structural model were evaluated with PLS-SEM by means of Smart PLS 3.0 software. The research questions ranging from five to nine were answered during the explanation of the structural model. Subsequently, the discussion of the findings of the quantitative data was presented in light of the previous literature. Next, qualitative findings related to Research Question Ten were presented in detail. Lastly, the discussion of the findings of the qualitative data was presented.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter is intended to sum up the study as a whole (see Figure 5.1). It draws attention to contributions of the current study to the body of literature, and offers implications for policy makers, syllabus designers, students and teachers. Lastly, it states the limitations of the current research and proposes potential research possibilities.

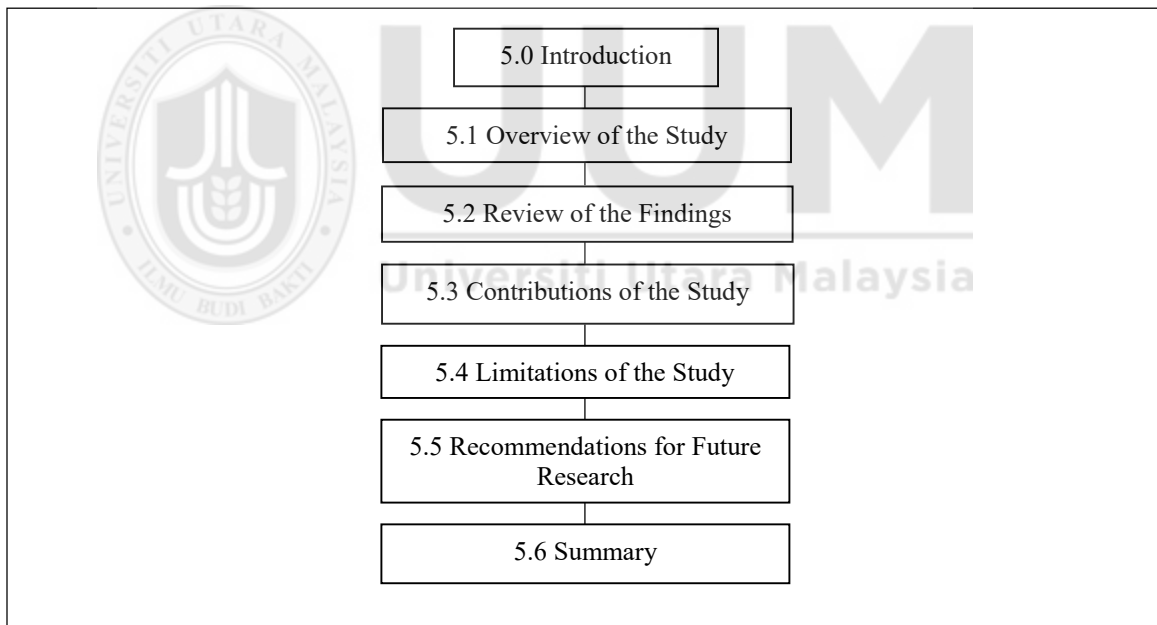


Figure 5.1. The Organisation of Chapter Five

5.1 Overview of the Study

The current study was conducted to determine the hierarchical order of self-efficacy sources (i.e., mastery experience, vicarious experience, verbal persuasion, and

physiological state) and metacognitive reading strategies (i.e., global, problem-solving, support). Furthermore, it aimed to determine the level of reading self-efficacy and reading comprehension. Lastly, it intended to determine the role of self-efficacy sources/metacognitive reading strategies in reading comprehension among Saudi EFL learners by employing reading self-efficacy beliefs as a mediator.

Considerably, the notion of conducting this study was provoked by the previous literature stating that Saudi students' level of reading in English language is unsatisfactory when they reach the university level (Al-Qahtani, 2016; Al-Roomy, 2013; Ismail, 2014), despite the fact that they study English language for more than six years in school (Alhawsawi, 2014; Al-Johani, 2009; Rajab, 2013). Also, the results provided by IELTS Report (2017) regarding Saudi learners' reading proficiency were alarming. According to the report, Saudi learners were ranked third lowest in the academic category and lowest in the general category in the world regarding reading scores. Numerous researchers consider lack of usage of reading strategies as the cause of their poor reading proficiency (Alkubaidi, 2014; Almutairi, 2008; Alrabai, 2014, 2016; Al-Seghayer, 2014; Elyas & Picard, 2010; Fareh, 2010; Rajab, 2013).

Numerous researchers agreed upon the fact that metacognitive reading strategies improve reading comprehension (Ahmadi et al., 2013; Hou, 2013; Ismail, 2014; Rastegar, Kermani & Khabir, 2017; Zhang & Seepho, 2013). Thus, it is imperative to study metacognitive reading strategies with the aim of offering Saudi learners with appropriate support to improve their reading comprehension. However, a detailed review of literature revealed

that limited research was conducted regarding metacognitive reading strategies on Preparatory-Year-Programme (PYP) students globally and Saudi students particularly. Furthermore, there was scarcity of research on the relationship between metacognitive reading strategies and reading comprehension by using a mediating variable between them. Therefore, reading self-efficacy beliefs was introduced as a mediating variable between them due to the reason that self-efficacy is a universal variable and can be used in any field of life (Bandura, 1986).

Also, according to Bandura (1986), there are four self-efficacy sources that influence reading self-efficacy beliefs of an individual and, consequently, reading comprehension. Thus, the current study also determined the role of four self-efficacy sources in reading comprehension by deploying reading self-efficacy beliefs as a mediator.

On the basis of the problem of the current study and reviewed literature described in Chapter One and Chapter Two, the current study intended to attain following objectives:

1. To identify the hierarchical order of the four self-efficacy sources reported by Saudi EFL learners.
2. To identify the hierarchical order of the usage of three metacognitive reading strategies reported by Saudi EFL learners.
3. To identify the level (high/low) of reading self-efficacy beliefs among Saudi EFL learners.
4. To identify the level of reading comprehension of Saudi EFL learners.

5. To determine the extent of correlation between four self-efficacy sources and reading self-efficacy beliefs among Saudi EFL learners.
 - a. To determine the extent of correlation between mastery experience and reading self-efficacy beliefs among Saudi EFL learners.
 - b. To determine the extent of correlation between vicarious experience and reading self-efficacy beliefs among Saudi EFL learners.
 - c. To determine the extent of correlation between verbal persuasion and reading self-efficacy beliefs among Saudi EFL learners.
 - d. To determine the extent of correlation between physiological state and reading self-efficacy beliefs among Saudi EFL learners.
6. To determine the extent of correlation between three metacognitive reading strategies and reading self-efficacy beliefs of Saudi EFL learners.
 - a. To determine the extent of correlation between global metacognitive reading strategies and reading self-efficacy beliefs of Saudi EFL learners.
 - b. To determine the extent of correlation between problem-solving metacognitive reading strategies and reading self-efficacy beliefs of Saudi EFL learners.
 - c. To determine the extent of correlation between support metacognitive reading strategies and reading self-efficacy beliefs of Saudi EFL learners.
7. To determine the extent of correlation between reading self-efficacy beliefs and reading comprehension of Saudi EFL learners.
8. To determine the mediating role of reading self-efficacy beliefs between four self-efficacy sources and reading comprehension of Saudi EFL learners

9. To determine the mediating role of reading self-efficacy beliefs between three metacognitive reading strategies and reading comprehension of Saudi EFL learners.
10. To explore the Saudi EFL learners' perspectives on the influence of self-efficacy sources and metacognitive reading strategies on their reading comprehension.

Taking into consideration the research objectives and arguments presented in Chapters One and Two, a conceptual model, involving the relationships of independent and mediating variables with a dependent variable was formulated in Chapter One.

In order to test the formulated conceptual framework, the current study employed a mixed-methods research design. Furthermore, in the quantitative phase, a correlational research design was used, where a questionnaire was the major instrument to collect the data regarding independent and mediating variables and a MCQs reading comprehension test was used to collect data related to dependent variable based on proportionate stratified random sampling. Regarding questionnaire instrument, three measures were adapted from past studies to gauge two independent variables and one mediating variable. For instance, 'questionnaire for sources of reading self-efficacy' was adapted from Dawit (2008) to measure self-efficacy sources. Similarly, Survey of Reading Strategies (SORS) was adopted just as it is from Mokhtari and Sheorey (2002). Likewise, 'reading self-efficacy beliefs questionnaire' was adapted from Tobing (2013) to gauge reading self-efficacy beliefs of Saudi EFL learners. Furthermore, to collect data related to reading comprehension, four reading passages were extracted from an IELTS reading

comprehension test. As it was a mixed-methods study, qualitative data was collected by developing a semi-structured interview protocol.

Regarding the validity of instruments, three field experts (i.e., UUM lecturers in English) were approached to address the content validity of the instruments. Modifications were done in the adapted questionnaires on the basis of recommendations provided by the field experts. On the other hand, the reliability of the instruments was addressed by conducting a pilot study on 40 EFL community college learners in Saudi Arabia. Results of the pilot study indicated that instruments were reliable, i.e., cronbach's alpha values ranged from 0.727 to 0.838.

A sample of 383 preparatory-year-programme (PYP) learners from eight Saudi government universities (i.e., King Saud University, Qassim University, Shaqra University, Majmaah University, King Saud Bin AbdulAziz University for Health Sciences, Al-Imam Mohammed Ibn Saud Islamic University, Prince Sattam Bin AbdulAziz University, Saudi Electronic University) participated in the quantitative phase of data collection. On the other hand, six Saudi PYP learners were interviewed to collect qualitative data. The subsequent section revises the major findings attained in the current study along with general discussions of the findings.

5.2 Review of Key Findings

The present study was conducted on EFL learners of Saudi universities. As stated earlier, it determined the hierarchical order of self-efficacy sources and metacognitive reading

strategies. Furthermore, it investigated the reading self-efficacy level as well as the reading comprehension level. Lastly, it determined the roles of self-efficacy sources/metacognitive reading strategies in reading comprehension by employing reading self-efficacy as a mediating variable. Therefore, ten questions were addressed by the current study.

Research Question One focused on determining the hierarchical order of self-efficacy sources among Saudi EFL learners. Findings revealed that *mastery experience* was the most reported source of self-efficacy with a high mean of 3.89. The current finding supports the tenets of Bandura's (1997) social cognitive theory that mastery experience was the most influential source of self-efficacy among various academic fields. This finding can be justified based on the possibility that Saudi EFL learners might have experienced successful experiences in the past related to their reading comprehension. Furthermore, findings indicated that *vicarious experience* was the second most reported self-efficacy source with a high mean of 3.77. The explanation of this finding could be attributed to the homogenous nature of current study's sample. All the learners were studying in PYP having almost the same level regarding English language competence. Therefore, they observed each other to boost their reading self-efficacy. *Verbal persuasion* was ranked as the third most reported source of self-efficacy with a mean of 3.53. Saudi EFL learners' less reliance on verbal persuasion as compared to aforementioned two sources could be attributed to lack of feedback from their teachers. Lastly, *physiological state* was rated as the least reported self-efficacy source among Saudi EFL learners with a rather moderate mean of 3.47. Less reliance on physiological state could be attributed to the role of gender. Previous research indicated that males are far less anxious than females.

As the current study's sample was male Saudi EFL learners thus, they didn't rely much on this particular self-efficacy source.

Research Question Two, similarly, was concerned with establishing the hierarchical order of three metacognitive reading strategies (i.e., global, problem-solving, and support strategies). Results showed that *global reading strategies* was ranked as the most reported strategy by Saudi EFL learners. This result could be attributed to the possibility that the teachers might have taught them global reading strategies more than the other two types of strategies. Moreover, it was revealed that *problem-solving reading strategies* was ranked as the second most reported strategy with a high mean of 3.51. The respondents might have used it with a high frequency due to the fact that it is more direct and easy to use. It does not necessitate a reader to use several resources while reading. Lastly, support reading strategies was ranked as the third and least used strategy among three strategies. The least usage of support strategies by Saudi EFL learners could be attributed to several reasons. Firstly, it is more difficult to use as compared to other two types of strategies. Secondly, they might have been unacquainted with its usage. Lastly, their teachers might have not taught them how to use it.

Research Question Three dealt with determining the level of *reading self-efficacy beliefs* of Saudi EFL learners. The findings indicated that majority of the learners, i.e., 235 (61.4%) had high reading self-efficacy level, while 148 (38.6%) were reported as low self-efficacious readers. This finding can be justified based on the possibility that the respondents might have gained high reading self-efficacy from its four hypothesised

sources (i.e., mastery experience, vicarious experience, verbal persuasion, and physiological state).

Research Question Four, like the previous question, coped with determining the level of *reading comprehension*. The results found that 92 (24.0%) learners were ‘good readers’. In addition, 183 (47.8%) learners fall in the category of ‘above average’ readers. Also, 76 (19.8%) learners were ‘average readers’. A small amount of learners, i.e., 9 (2.3%) learners were ‘below average readers’. Lastly, 23 (6%) learners fell in the category of ‘poor readers’. It is evident that majority of the respondents were above average readers. This finding could be justified based on the speculation that their teachers might have taught them reading strategies which assisted them to comprehend the text in a better way.

Research Question Five was assigned to determine the relationship between self-efficacy sources and reading self-efficacy beliefs. Findings revealed that mastery experience was significantly as well as positively correlated with reading self-efficacy beliefs. This finding could be explained based on a possibility that Saudi EFL learners might have experienced positive experiences regarding their reading in the past and those experiences have helped them to increase their reading self-efficacy. Also, vicarious experience was positively and significantly correlated with reading self-efficacy beliefs. This finding could be attributed to the fact that all the respondents have several similar attributes (i.e., age, sex, educational background, and nationality). The previous research indicated that learners increase their self-efficacy by observing each other’s success when the models are more relatable. Furthermore, verbal persuasion was found to be significantly correlated with reading self-

efficacy beliefs. However, the direction of a relationship was negative. In simple words, this finding implied that teachers' feedback decreases reading self-efficacy of the Saudi EFL learners. The possible justifications for this finding could be lack of positive feedback by teachers, peers and other important people in the life of Saudi EFL learners. Lastly, physiological state was not correlated with reading self-efficacy beliefs. This finding could be attributed to the possibility that Saudi EFL learners do not take much interest in studies due to the fact that majority of the Saudis are wealthy and they do not necessarily need a job after completing their studies. Therefore, it can be speculated that they might not get anxious related to their reading and reading results.

Research Question six was concerned with determining the relationship between metacognitive reading strategies and reading self-efficacy beliefs. The outcomes revealed that all the three metacognitive reading strategies (i.e., global, problem-solving, and support) were significantly and positively correlated with reading self-efficacy beliefs. These findings could be explained based on the fact that Saudi EFL learners had high reading self-efficacy which led them to the more frequent usage of metacognitive reading strategies. Bandura's (1986) social cognitive theory affirms that self-efficacy influences the behaviour of the learners by impacting the way they think, self-motivate and persist while doing demanding tasks.

Research Question Seven was devoted to determine the relationship between reading self-efficacy beliefs and reading comprehension. The results discovered that reading self-efficacy was significantly and positively correlated with reading comprehension. To put it

in simple words, findings implied that reading comprehension improved with the increase in reading self-efficacy of Saudi EFL learners. The current finding can be attributed to the possibility that Saudi EFL learners might have used reading strategies which resulted in boosting their reading self-efficacy. As a consequence of their elevated reading self-efficacy beliefs, their reading comprehension might have improved.

Research Question Eight was concerned with determining the mediating role of reading self-efficacy in establishing the correlation between self-efficacy sources and reading comprehension. Results indicated that reading self-efficacy mediated the relationship successfully between three self-efficacy sources (i.e., mastery experience, vicarious experience, and verbal persuasion) and reading comprehension. However, the relationship between physiological state and reading comprehension was not mediated by reading self-efficacy.

Research Question Nine, likewise, dealt with determining the mediating role of reading self-efficacy in establishing the relationship between metacognitive reading strategies (i.e., global, problem-solving, and support) and reading comprehension. Findings revealed that reading self-efficacy successfully acted as a mediating variable in determining the relationship between all the three metacognitive reading strategies and reading comprehension.

Research Question Ten was qualitative in nature. Thus, it focused on exploring the Saudi EFL learners' perspectives regarding the influence of self-efficacy sources and

metacognitive reading strategies on reading comprehension. Consequently, several significant themes were extracted and discussed in Chapter Four.

5.3 Contributions of the Study

This section provides three kinds of contributions, including theoretical, methodological, and practical contributions.

5.3.1 Theoretical Contributions

The results of the present study have contributed to the body of knowledge in several ways. *Firstly*, in the current study, the role of self-efficacy sources in reading comprehension was investigated. Previously, several studies indicated that self-efficacy sources are significant predictors of numerous types of achievements (i.e., academic achievement, mathematics achievement, English achievement, and science performance) (Arslan, 2012; Kaya & Bozdog, 2016; Williams, 2017; Yurt, 2014; Zarei & Naghdi, 2017). However, there was severe dearth of research regarding the relationship of self-efficacy sources and reading comprehension. The findings indicated that three self-efficacy sources (i.e., mastery experience, vicarious experience, and verbal persuasion) are significant predictors of reading comprehension of Saudi EFL learners. These findings could be beneficial for EFL teachers and students. EFL teachers can incorporate these self-efficacy sources in their students to improve their reading comprehension.

Moreover, this study contributed to social cognitive theory (SCT). SCT has been used in numerous research fields. However, more specifically, in EFL, the current research is first

of its nature which employed SCT to determine the relationship between self-efficacy sources and reading comprehension. Thus, the current study has helped to enlarge the scope of SCT.

Secondly, rigorous literature review indicated that self-efficacy sources were correlated with several kinds of self-efficacy, i.e., science self-efficacy, mathematics self-efficacy, academic self-efficacy, learning self-efficacy, French language self-efficacy, English language self-efficacy, writing self-efficacy, listening self-efficacy (Chen & Usher, 2013; Hampton & Mason, 2003; Joët et al., 2011; Lin, 2016; Lin & Tsai, 2018; Pajares et al., 2007; Phan, 2012; Phan & Ngu, 2016; Usher & Pajares, 2009). However, limited research was conducted on the relationship of self-efficacy sources and reading self-efficacy beliefs. Also, Cantrell et al. (2013) recommended that research needs to be done on the relationship between self-efficacy sources and reading self-efficacy beliefs to generalise the self-efficacy construct.

Thus, the current study examined the roles of reading self-efficacy sources in reading self-efficacy beliefs to fill a gap in the body of literature. The findings of the current study revealed that three out of four self-efficacy sources (i.e., mastery experience, vicarious experience, and verbal persuasion) were significantly correlated with reading self-efficacy beliefs. These findings could be potentially beneficial for the EFL teachers. Self-efficacy beliefs influence the performance of the learners (Bandura, 1986, 1997). Thus, EFL teachers can inculcate self-efficacy sources in their pupils to raise their reading self-efficacy beliefs. Regarding the first self-efficacy source, i.e., mastery experience, the

teachers should remind the students about their previous accomplishments related to reading in order to boost their reading self-efficacy beliefs. Likewise, regarding the second self-efficacy source, i.e., vicarious experience, the teachers ought to introduce positive models in front of their pupils so that the pupils can observe those models related to reading and consequently increase their reading self-efficacy. Moreover, regarding the third self-efficacy source, i.e., verbal persuasion, the students should be provided positive feedback related to their reading skills in order to elevate their reading self-efficacy beliefs. Lastly, regarding the fourth self-efficacy source, i.e., physiological state, the teachers should try to decrease the anxiety among students in order to increase the level of their reading self-efficacy.

Thirdly, previous studies determined the relationship between metacognitive reading strategies and reading comprehension directly (Ahmadi et al., 2013; Hou, 2013; Ismail, 2014; Rastegar et al., 2017; Zhang & Seepho, 2013). However, there is scarcity of research studies in which the relationship between aforementioned two variables was determined by using a mediating variable. Thus, the current study filled this theoretical gap by determining the roles of metacognitive reading strategies in reading comprehension by using reading self-efficacy beliefs as a mediating variable. The findings revealed that reading self-efficacy beliefs mediated the relationship between metacognitive reading strategies and reading comprehension. In other words, the findings showed that reading self-efficacy beliefs also played its role in the relationship between metacognitive reading strategies and reading comprehension. This finding could be beneficial for the EFL teachers. In addition to teaching metacognitive reading strategies, EFL teachers should also

try to raise reading self-efficacy beliefs of the students to improve their reading comprehension performance.

Fourthly, the relationship between metacognitive reading strategies and self-efficacy beliefs was determined by a large amount of studies (Ahmadian & Pasand, 2017; Jee, 2015; Kargar & Zamanian, 2014; Kassem, 2015; Keskin, 2014; Mokhtar, 2015; Nosratinia, Saveiy & Zaker, 2014; Stracke, 2016; Sönmez & Durmaz, 2017; Taghinezhad et al., 2015; Tavakoli & Koosha, 2016; Tuncer & Dogan, 2016; Uçar, 2016; Yang & Wang, 2015; Yılmaz, 2010; Zarei & Gilanian, 2015). However, of these studies, only one study, i.e., Ahmadian and Pasand (2017) used Mokhtari and Sheorey's (2002) metacognitive reading strategies taxonomy. The present study also used the same taxonomy as used by Ahmadian and Pasand. Thus, according to researcher's best knowledge, the current study was the second study that determined the relationship between two variables by employing aforementioned taxonomy. The present study could be potentially beneficial in generalising the usage of this taxonomy in the future studies. The future researchers could use this taxonomy when conducting research between metacognitive reading strategies and reading self-efficacy beliefs.

Lastly, findings indicated that there was no relationship between physiological state and reading self-efficacy beliefs. This finding is opposite to the basic tenets of Bandura's (1986) social cognitive theory (SCT) regarding four hypothesised self-efficacy sources. Also, there is limited previous research that supports this finding. Thus, due to its unique nature, it could contribute to Bandura's SCT. This could prove to be a ground-breaking

finding for the future researchers due to the reason that it challenged the basic tenets of SCT. The future researchers could potentially conduct research between physiological state and reading comprehension in EFL settings to look into this finding in more detail.

5.3.2 Methodological Contributions

Of the studies conducted on the relationship between self-efficacy sources and reading self-efficacy beliefs, limited research was conducted by using a mixed-methods research design. Furthermore, only four studies employed a mixed-methods approach in determining the relationship between metacognitive reading strategies and reading self-efficacy beliefs (Purdie & Oliver, 1999; Shang, 2010; Tavakoli & Koosha, 2016; Wong, 2005). Likewise, only five studies used a mixed-methods approach in establishing the relationship between reading self-efficacy beliefs and reading comprehension (Booth et al., 2017; Hager, 2017; Hedges & Gable, 2016; Salehi & Khalaji, 2014; Shang, 2010). Thus, it is evident that there is scarcity of mixed-methods studies conducted on the above mentioned variables. Therefore, the current study employed a mixed-methods approach to fill this methodological gap. The major reason of employing a mixed-methods approach was to gain access to detailed viewpoints of Saudi EFL learners in determining the roles of self-efficacy sources and metacognitive reading strategies in reading comprehension.

Additionally, as a base of methodological contribution, the current study has made use of a unique analysis technique which contributed in augmenting the quantitative methodology. For example, majority of the past studies conducted on variables involved in the current study, used diverse analysis techniques by employing SPSS or Excel to determine the phenomenon. However, the present study employed the SEM-PLS approach,

in which it is possible to evaluate both measurement and structural models concurrently. Furthermore, as pictorial representation of the findings convey a forceful message as compared to words, thus, the relationships among variables were presented in the form of models.

5.3.3 Practical Contributions

In addition to theoretical and methodological implications, the findings of the current study have several practical implications for students, teachers, policy makers, and syllabus designers. The findings revealed a significant positive relationship of three self-efficacy sources with reading self-efficacy, and reading self-efficacy in turn showed a significant positive relationship with reading comprehension. These findings showed that self-efficacy and self-efficacy sources played a vital role in improving Saudi EFL learners' reading comprehension. Thus, EFL teachers ought to focus on developing reading self-efficacy beliefs by incorporating self-efficacy sources in students to improve their reading comprehension performance. Regarding the first self-efficacy source, i.e., mastery experience, the teachers should constantly make the students realise about their previous reading comprehension achievements. Consequently, the students reading self-efficacy would be increased and eventually their reading comprehension would get better.

Additionally, regarding the second self-efficacy source, i.e., vicarious experience, the teachers should instruct the students to observe their peers regarding reading. As a consequence, the students would develop reading self-efficacy in themselves, which in turn would improve their reading comprehension. Moreover, regarding the third self-efficacy

source, i.e., verbal persuasion, the teachers ought to provide positive feedback related to reading comprehension abilities of their students in order to elevate their reading self-efficacy and reading comprehension level. Lastly, regarding the fourth self-efficacy source, i.e., physiological state, the teachers should teach such techniques to their students so that they would be able to manage stress and anxiety while reading. As a result, their reading self-efficacy would be raised which in turn would raise their reading comprehension level. This finding could be applicable to other Arab countries' EFL teachers and learners as well due to the same cultural and educational background.

Furthermore, the findings revealed that metacognitive reading strategies were significantly correlated with reading self-efficacy beliefs, and reading self-efficacy beliefs, consequently, showed a significant relationship with reading comprehension. This finding could be beneficial for the EFL teachers as they ought to deliver metacognitive strategies instruction to the students to make them more self-efficacious in reading and subsequently, their reading comprehension would improve. Metacognitive reading strategies instruction include several vital strategies including having a purpose in mind before reading, note-taking, reading aloud, skimming, scanning, reading slowly, visualising, rereading, translating from L2 to L1. All of the aforementioned strategies, if taught properly to EFL learners could potentially raise their reading self-efficacy level and improve their reading comprehension to a large extent.

Also, policy makers and syllabus designers should incorporate metacognitive reading strategies in reading curriculum to make the process of reading comprehension smooth for

EFL readers. Numerous researchers asserted that metacognitive strategies should be a vital part of reading curriculum (Braund, 2017; Gaskins & Pressley, 2007). Furthermore, experimental studies conducted in several EFL countries revealed that metacognitive reading strategies instruction influenced the reading comprehension performance of the learners significantly (Ajideh, Zohrabi, & Pournalvar, 2018 in Iran; Albazi & Shukri, 2016 in KSA; Koukourikou, Manoli, & Griva, 2018 in Greece; Linda & Sutapa, 2015 in Indonesia; Tavakoli & Koosha, 2016 in Iran; Younus & Khan, 2017 in Pakistan). As many researchers identified that reading comprehension level of Saudi school learners is not up to the mark (Al-Qahtani, 2010, 2016; Al-Roomy, 2013; Ismail, 2014), therefore, there is a need to include metacognitive reading strategies' instruction particularly at school level. For instance, to activate the background knowledge of the learners regarding a particular topic, a teacher can take help of brainstorming technique to elicit background knowledge from their brains. Likewise, another metacognitive strategy (i.e., using reference materials) can be taught by asking them to look for meanings of difficult words from a dictionary. In short, the reading comprehension ability of Saudi EFL learners could be improved if metacognitive reading strategies are taught at a school level.

5.4 Limitations of the Study

The current study has offered numerous perceptions and substantial information regarding reading comprehension of Saudi EFL learners, and also focused on the roles of self-efficacy sources, reading self-efficacy beliefs and metacognitive reading strategies in their reading comprehension. The limitations of the current study are described in subsequent paragraphs.

Firstly, in the present study, data was collected from male students only. However, female students were not included due to the cultural limitations. Saudi educational system does not allow intermingling of opposite genders. For that reason, both gender groups attend separate educational institutions from school up to university levels. As the researcher had access to male university students, consequently, findings of the current study can be generalised to male students only.

Secondly, the sample of the study consisted of Saudi EFL students of government universities. Thus, the current study's findings cannot be generalised to the students of private universities. Furthermore, the sample of the study consisted of 'Preparatory-Year-Programme' (PYP) students. Thus, the generalisation of the findings of current study to other departments/disciplines could be dubious.

Thirdly, in terms of measurement of reading comprehension (i.e., dependent variable), only MCQs were extracted from IELTS reading exam. However, there were some other items found in IELTS reading exam, i.e., true/false statements, fill in the blanks, etc. Aforementioned items, if added in the current study's reading comprehension test, could have offered a comprehensive scope for the participants of this study to reflect their reading comprehension skills, and consequently, an extra comprehensive picture of Saudi EFL learners' reading comprehension performance could have been drawn.

5.5 Recommendations for Future Research

There were many studies conducted on the relationship of metacognitive reading strategies and reading self-efficacy beliefs. However, the current study was the second of its kind which employed Survey of Reading Strategies (SORS) developed by Mokhtari and Sheorey (2002) in a correlational study of metacognitive reading strategies and reading self-efficacy beliefs. Earlier than the current study, only one study, i.e., Ahmadian and Pasand (2017) used this instrument in a correlational study of metacognitive reading strategies and self-efficacy beliefs. Therefore, the future researchers should use this instrument, as this instrument is still novel in terms of correlational studies among metacognitive reading strategies and reading self-efficacy beliefs.

Additionally, the current study employed only MCQs in determining the reading comprehension performance of the students. The future researchers should consider adding other items as well, i.e., true/false statements, fill in the blanks, matching the columns etc. in their reading comprehension tests.

As this study considered only government universities' EFL learners; therefore, future researchers should conduct a comparative study among government and private universities' EFL learners. This is not only to determine their reading comprehension performance, but also to assess self-efficacy sources, self-efficacy beliefs and metacognitive reading strategies so as to broaden our knowledge regarding these psychological variables.

The current study employed a correlational research design to determine the relationship among variables. The future researchers should conduct intervention studies, since there is a lack of intervention studies on reading self-efficacy and reading comprehension (Unrau et al., 2018).

Lastly, future researchers should conduct studies in other EFL countries particularly the Middle Eastern countries, on the same variables, as used in this study to determine whether the findings remain the same.

5.6 Summary

The present study investigated the roles of self-efficacy sources/metacognitive reading strategies in reading comprehension by using reading self-efficacy beliefs as a mediating variable. On the basis of the findings and discussion of the present study, the following closing remarks can be drawn:

- a) The hierarchical order of the reported self-efficacy sources among Saudi EFL learners is as follows: mastery experience, vicarious experience, verbal persuasion, and physiological state.
- b) Saudi EFL learners use metacognitive reading strategies in the following hierarchical order: global strategies, problem-solving strategies, and support strategies.
- c) The majority of the Saudi EFL learners had a high self-efficacy level.
- d) 92 (24.0%) learners were 'good readers'. Furthermore, 183 (47.8%) learners fall in the category of 'above average' readers. Moreover, 76 (19.8%)

learners were 'average readers'. A small number of learners, i.e., 9 (2.3%) learners were 'below average readers'. Lastly, 23 (6%) learners fall in category of 'poor readers'.

e) The relationship between two self-efficacy sources (i.e., mastery experience, vicarious experience) and reading self-efficacy beliefs is significant as well as positive. Further, verbal persuasion shows a negative significant association with reading self-efficacy. Lastly, there is no significant relationship between physiological state and reading self-efficacy.

f) The relationship between all the three metacognitive reading strategies (i.e., global, problem-solving, support) and reading self-efficacy is positive and significant.

g) The relationship between reading self-efficacy and reading comprehension is positive and significant.

h) Reading self-efficacy successfully mediated the relationship between three self-efficacy sources (i.e., mastery experience, vicarious experience, and verbal persuasion) and reading comprehension. However, reading self-efficacy did not act as a mediator in determining the relationship between physiological state and reading comprehension.

i) Reading self-efficacy successfully mediated the relationship between all the three metacognitive reading strategies and reading comprehension.

j) Interviewees' responses provided insightful knowledge regarding the influence of self-efficacy sources and metacognitive reading strategies on reading comprehension.

The above-mentioned outcomes have offered significant insights into the role played by self-efficacy sources, metacognitive reading strategies, and reading self-efficacy beliefs in determining the reading comprehension of the Saudi EFL learners. During the course of this study, the researcher attempted his best through the lengthy and challenging procedures involved in conducting this study.

The findings of this research may inspire future researchers to conduct research involving these variables in other contexts. As stated previously, the scarcity of research on both the Saudi EFL learners involving these variables particularly and the relationship among these variables globally can open a new passage for other research work to commence another new, expectantly interesting and rewarding journey.



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APPENDICES

Appendix A

Questionnaire for Sources of Reading Self-Efficacy

Instructions:

Please use the following scale to answer the following statements. Circle the number that best describes your level of agreement.

1 **2** **3** **4** **5**
Strongly Disagree **Disagree** **Neutral** **Agree** **Strongly Agree**

No.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	I am satisfied with my last semester's English reading tasks and tests.	1	2	3	4	5
2.	My friends tend to avoid their English reading assignments.	1	2	3	4	5
3.	I feel confident when my parents tell me I am doing well at reading in English.	1	2	3	4	5
4.	I feel nervous when I have problems understanding a passage in English.	1	2	3	4	5
5.	I received satisfactory results in my English reading assignments.	1	2	3	4	5
6.	I have close friends whom I respect for their English reading achievements.	1	2	3	4	5
7.	I was not good at performing English reading comprehension activities in my school.	1	2	3	4	5

8.	I admire good readers of English.	1	2	3	4	5
9.	I have always had a natural talent for English reading comprehension.	1	2	3	4	5
10.	I feel confident about my own reading ability when other students in my class also do well in reading in English.	1	2	3	4	5
11.	I am always anxious about doing an English reading task.	1	2	3	4	5
12.	I notice my heart starts pounding when I take an English reading test.	1	2	3	4	5
13.	My mind goes blank and I am unable to think clearly when trying to read in English.	1	2	3	4	5
14.	I usually appreciate my English teachers when they teach reading.	1	2	3	4	5
15.	No one at home is good at reading in English.	1	2	3	4	5
16.	People often tell me that I am good at reading in English.	1	2	3	4	5
17.	My English teachers often encourage me by praising my reading ability.	1	2	3	4	5
18.	My classmates think that I understand everything in an English reading passage.	1	2	3	4	5

Appendix B

Reading Self-Efficacy Beliefs Questionnaire

Instructions:

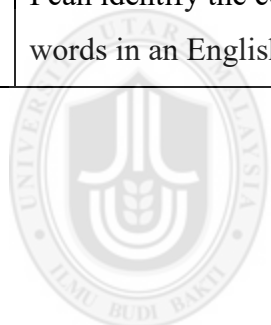
Please rate how confident you are that you can do in each of the things described below by circling the appropriate number. Your answers will be kept confidential and you will not be identified by name.

Rate your degree of agreement by circling a number from 1 to 5 using the scale below:

Strongly Disagree **Disagree** **Neutral** **Agree** **Strongly Agree**
 1 2 3 4 5

NO.	Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1.	I can identify the parts of speech (i.e., noun, pronoun, verb, adverb, adjective, preposition, conjunction, interjection) of the words in an English text.	1	2	3	4	5
2.	I can understand the meaning of words in an English reading text.	1	2	3	4	5
3.	I can guess the meaning of a word from its context in an English reading text.	1	2	3	4	5
4.	I can connect my real-life knowledge and English text information.	1	2	3	4	5
5.	I can identify most of the denotations (i.e., dictionary meanings) and connotations (i.e., emotional associations) of a word in an English	1	2	3	4	5

	text. For example, the dictionary meaning (denotation) of <i>dove</i> is a bird, whereas, in literature, its associated meaning (connotation) is peace.					
6.	I can find the main idea in an English reading text.	1	2	3	4	5
7.	I can understand the writer's purpose in an English text.	1	2	3	4	5
8.	I can identify the type of reading passage in English.	1	2	3	4	5
9.	I can understand the relationships between sentences in an English text.	1	2	3	4	5
10.	I can identify the correct spelling of words in an English text.	1	2	3	4	5



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Appendix C

Survey of Reading Strategies (SORS)

Instructions:

The purpose of this survey is to collect information about the various techniques you use when you read academic materials in English (e.g., reading textbooks for homework or examinations, etc).

All the items below refer to your reading of academic materials (such as textbooks, not newspapers or magazines). Each statement is followed by five numbers: 1, 2, 3, 4, and 5, and each number means the following:

‘1’ means that ‘I never or almost never do this’.

‘2’ means that ‘I do this only occasionally’.

‘3’ means that ‘I sometimes do this’.

‘4’ means that ‘I usually do this’.

‘5’ means that ‘I always or almost always do this’.

After reading each statement, circle the number (1, 2, 3, 4, or 5) which applies to you.

Note that there are no right or wrong responses to any of the items on this survey.

No.	Statement					
		Never	Occasionally	Sometimes	Usually	Always
1.	I have a purpose in mind when I read.	1	2	3	4	5
2.	I take notes while reading to help me understand what I read.	1	2	3	4	5
3.	I think about what I know to help me understand what I read.	1	2	3	4	5
4.	I take an overall view of the text to see what it is about before reading it.	1	2	3	4	5
5.	When the text becomes difficult, I read aloud to help me understand what I read.	1	2	3	4	5

6.	I think about whether the content of the text fits my reading purpose.	1	2	3	4	5
7.	I read slowly and carefully to make sure I understand what I am reading.	1	2	3	4	5
8.	I review the text first by noting its characteristics like length and organization.	1	2	3	4	5
9.	I try to get back on track when I lose concentration.	1	2	3	4	5
10.	I underline or circle information in the text to help me remember it.	1	2	3	4	5
11.	I adjust my reading speed according to what I am reading.	1	2	3	4	5
12.	When reading, I decide what to read closely and what to ignore.	1	2	3	4	5
13.	I use reference materials (e.g., a dictionary) to help me understand what I read.	1	2	3	4	5
14.	When the text becomes difficult, I pay closer attention to what I am reading.	1	2	3	4	5
15.	I use tables, figures, and pictures in the text to increase my understanding.	1	2	3	4	5
16.	I stop from time to time and think about what I am reading.	1	2	3	4	5
17.	I use context clues to help me better understand what I am reading.	1	2	3	4	5
18.	I paraphrase (restate ideas in my own words) to better understand what I read.	1	2	3	4	5
19.	I try to picture or visualize information to help remember what I read.	1	2	3	4	5
20.	I use typographical features like bold face and italics to identify key information.	1	2	3	4	5
21.	I critically analyze and evaluate the information presented in the text.	1	2	3	4	5
22.	I go back and forth in the text to find relationships among ideas in it.	1	2	3	4	5
23.	I check my understanding when I come across new information.	1	2	3	4	5
24.	I try to guess what the content of the text is about when I read.	1	2	3	4	5
25.	When the text becomes difficult, I re-read it to increase my understanding.	1	2	3	4	5
26.	I ask myself questions I like to have answered in the text.	1	2	3	4	5
27.	I check to see if my guesses about the text are right or wrong.	1	2	3	4	5
28.	When I read, I guess the meaning of unknown words or phrases.	1	2	3	4	5

29.	When reading, I translate from English into Arabic.	1	2	3	4	5
30.	When reading, I think about the information in both English and Arabic.	1	2	3	4	5



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Appendix D

IELTS Reading Comprehension Test

READING PASSAGE 1

You should spend about 15 minutes on Questions 1–5, which are based on Reading Passage 1 below.

The creation myth

A. It is a myth that creative people are born with their talents: gifts from God or nature. Creative genius is, in fact, latent within many of us, without our realising. But how far do we need to travel to find the path to creativity? For many people, a long way. In our everyday lives, we have to perform many acts out of habit to survive, like opening the door, shaving, getting dressed, walking to work, and so on. If this were not the case, we would, in all probability, become mentally unhinged. So strongly ingrained are our habits, though this varies from person to person, that, sometimes when a conscious effort is made to be creative, automatic response takes over. We may try, for example, to walk to work following a different route, but end up on our usual path. By then it is too late to go back and change our minds. Another day, perhaps. The same applies to all other areas of our lives. When we are solving problems, for example, we may seek different answers, but, often as not, find ourselves walking along the same well-trodden paths.

B. So, for many people, their actions and behaviour are set in immovable blocks, their minds clogged with the cholesterol of habitual actions, preventing them from operating freely, and thereby stifling creation. Unfortunately, mankind's very struggle for survival has become a tyranny - the obsessive desire to give order to the world is a case in point. Witness people's attitude to time, social customs and the panoply of rules and regulations by which the human mind is now circumscribed.

C. The groundwork for keeping creative ability in check begins at school. School, later university and then work teach to regulate our lives, imposing a continuous process of restrictions, which is increasing exponentially with the advancement of technology. Is it surprising then that creative ability appears to be so rare? It is trapped in the prison that we have erected. Yet, even here in this hostile environment, the foundations for creativity are being laid; because setting off on the creative path is also partly about using rules and regulations. Such limitations are needed so that once they are learnt, they can be broken.

D. The truly creative mind is often seen as totally free and unfettered. But a better image is of a mind, which can be free when it wants, and one that recognises that rules and regulations are parameters, or barriers, to be raised and dropped again at will. An example of how the human mind can be trained to be creative might help here. People's minds are just like tense muscles that need to be freed up and the potential unlocked. One

strategy is to erect artificial barriers or hurdles in solving a problem. As a form of stimulation, the participants in the task can be forbidden to use particular solutions or to follow certain lines of thought to solve a problem. In this way they are obliged to explore unfamiliar territory, which may lead to some startling discoveries. Unfortunately, the difficulty in this exercise, and with creation itself, is convincing people that creation is possible, shrouded as it is in so much myth and legend. There is also an element of fear involved, however subliminal, as deviating from the safety of one's own thought patterns is very much akin to madness. But, open Pandora's box, and a whole new world unfolds before your very eyes.

E. Lifting barriers into place also plays a major part in helping the mind to control ideas rather than letting them collide at random. Parameters act as containers for ideas, and thus help the mind to fix on them. When the mind is thinking laterally, and two ideas from different areas of the brain come or are brought together, they form a new idea, just like atoms floating around and then forming a molecule. Once the idea has been formed, it needs to be contained or it will fly away, so fleeting is its passage. The mind needs to hold it in place for a time so that it can recognise it or call on it again. And then the parameters can act as channels along which the ideas can flow, developing and expanding. When the mind has brought the idea to fruition by thinking it through to its final conclusion, the parameters can be brought down and the idea allowed to float off and come in contact with other ideas.

Questions 1–5

Choose the correct letter, A, B, C or D.

1. According to the writer, creative people ...
A are usually born with their talents
B are born with their talents
C are not born with their talents
D are geniuses

2. According to the writer, creativity is ...
A a gift from God or nature
B an automatic response
C difficult for many people to achieve
D a well-trodden path

3. According to the writer, ...
A the human race's fight to live is becoming a tyranny
B the human brain is blocked with cholesterol
C the human race is now circumscribed by talents
D the human race's fight to survive stifles creative ability

4. Advancing technology ...
A holds creativity in check
B improves creativity

C enhances creativity
D is a tyranny

5. According to the author, creativity ...
A is common
B is increasingly common
C is becoming rarer and rarer
D is a rare commodity

READING PASSAGE 2

You should spend about 15 minutes on Questions 6–10, which are based on Reading Passage 2 below.

In or out?

British further education colleges did not traditionally have any concerns about student drop-out, because the origins of the sector were in vocational apprenticeship training for employers where the apprentices could not drop out without endangering their job. In the 70s, this sector began to expand into more general education courses, which were seen both as an alternative to school for 16-18 year-olds and a second chance for adults. The philosophy was mainly liberal with students regarded as adults who should not be heavily monitored, but rather free to make their own decisions; it was not uncommon to hear academic staff argue that attendance at classes was purely voluntary.

In the 80s, with an increased consciousness of equal opportunities, the focus of the further education colleges moved to widening participation, encouraging into colleges students from previously under-represented groups, particularly from ethnic minorities. This, in turn, led to a curriculum which was more representative of the new student body. For example, there were initiatives to ensure the incorporation of literature by black writers into A-level literature courses; history syllabuses were altered to move beyond a purely Eurocentric view of the world; and geography syllabuses began to look at the politics of maps.

A turning point came in 1991 with the publication of a report on completion rates by the government inspection body for education, Her Majesty's Inspectorate for England and Wales, (HMI 1991). However, this report was based on academic staff's explanations of why students had left. It suggested that the vast majority left either for personal reasons or because they had found employment and that only 10% left for reasons that could in any way be attributed to the college.

Meanwhile, Britain had been going through the Thatcherite revolution and, in parallel to the Reagan politics of the US, a key principle was the need to reduce taxation drastically. At this point (and to a large extent still), further and higher education colleges were almost entirely funded from the public purse. There had been many cuts in this funding through the 80s, but no one had really looked at value for money. However, in the early

90s, the Audit Commission with Office of Standards in Education (OFSTED) (the new version of HMI) turned the spotlight onto further, education and published a seminal report, *Unfinished Business* (Audit Commission and OFSTED 1993), which showed that drop-out was happening on a significant scale and, crucially given the politics of the time, attributed a cost to the state of £500 million, arguing that this was a waste of public (i.e. taxpayers') money. To quote Yorke (1999), non-completion became political. The Audit Commission report coincided with government moves to privatise the functions of the state as much as possible; and with the decision to remove further education from the control of local government and give it a quasi-dependent Status, where colleges were governed by independent boards of governors bidding to the state for funding to run educational provision. As part of this, a new series of principles for funding and bidding were developed (FEFC 1994) which incorporated severe financial penalties for student drop-out. In essence, the system is that almost all the state funding is attached to the individual student. There is funding for initial advice and guidance, on-course delivery and student achievement but if the student drops out, the college loses that funding immediately, so that loss of students in the first term leads to an immediate loss of college funding for the other two terms. Not surprisingly, this focused the concern of colleges immediately and sharply on the need to improve student retention rates. Recently, therefore, there has been considerable effort to improve retention but, as Martinez (1995) pointed out, there was no body of research on which to base strategies. An additional complexity was that colleges had been slow to computerise their student data and most colleges were in the position of not knowing what their retention rates were or any patterns involved. Where data did exist it was held separately by either administrative or academic staff with poor communication between these groups. Colleges, however, jumped into a number of strategies based largely on experience, instinct and common sense and publication of these began. (Martinez 1996; Martinez 1997; Kenwright 1996; Kenwright 1997)

The main strategies tried are outlined in the literature as summarised by Martinez (1996). These include sorting activities around entry to ensure 'best fit', supporting activities including child care, financial support and enrichment/learner support, connecting activities to strengthen the relationship between the college and the student, including mentoring and tutorials and activities to transform the student, including raising of expectations and study/career development support and tutoring.

Questions 6–10

Choose the correct letter, A, B, C or D.

6. The report *Unfinished Business* ...

A pointed out the politics of the time

B gave £500 million to the state

C linked drop-out to wasting money

D turned the spotlight

7. The new series of principles developed in 1994 by the FEFC

A gave money to each student

- B** was quasi-independent
- C** meant colleges had to turn their immediate attention to improving student retention rates
- D** was aimed at improving teacher retention rates

8. Attempts to reduce the student drop-out rate were hindered, because ...

- A** there was a lack of research data on which to base strategies
- B** colleges did not know what to do
- C** computers in colleges were slow
- D** colleges had no patterns

9. Further hindrances in reducing the student drop-out rate were ...

- A** colleges' slowness in computerising data and not knowing their retention rates, nor what patterns of retention existed
- B** college inertia and administrative incompetence
- C** computer glitches and strikes, which occurred at most colleges
- D** colleges not knowing their retention rates or where the patterns were

10. Colleges' strategies to deal with the problem of low retention ...

- A** brought administrative and academic staff together
- B** varied enormously
- C** jumped
- D** were based on something other than data



READING PASSAGE 3

You should spend about 15 minutes on Questions 11–15, which are based on Reading Passage 3 below.

Day after day we hear about how anthropogenic development is causing global warming. According to an increasingly vocal minority, however, we should be asking ourselves how much of this is media hype and how much is based on real evidence. It seems, as so often is the case, that it depends on which expert you listen to, or which statistics you study.

Yes, it is true that there is a mass of evidence to indicate that the world is getting warmer, with one of the world's leading weather predictors stating that air temperatures have shown an increase of just under half a degree Celsius since the beginning of the twentieth century. And while this may not sound like anything worth losing sleep over, the international press would have us believe that the consequences could be devastating. Other experts, however, are of the opinion that what we are seeing is just part of a natural upward and downward swing that has always been part of the cycle of global weather. An analysis of the views of major meteorologists in the United States showed that less than

20% of them believed that any change in temperature over the last hundred years was our own fault-the rest attributed it to natural cyclical changes.

There is, of course, no denying that we are still at a very early stage in understanding weather. The effects of such variables as rainfall, cloud formation, the seas and oceans, gases such as methane and ozone, or even solar energy are still not really understood, and therefore the predictions that we make using them cannot always be relied on. Dr. James Hansen, in 1988, was predicting that the likely effects of global warming would be a raising of world temperature which would have disastrous consequences for mankind: "a strong cause and effect relationship between the current climate and human alteration of the atmosphere". He has now gone on record as stating that using artificial models of climate as a way of predicting change is all but impossible. In fact, he now believes that, rather than getting hotter, our planet is getting greener as a result of the carbon dioxide increase, with the prospect of increasing vegetation in areas which in recent history have been frozen wastelands.

In fact, there is some evidence to suggest that as our computer-based weather models have become more sophisticated, the predicted rises in temperature have been cut back. In addition, if we look at the much reported rise in global temperature over the last century, a close analysis reveals that the lion's share of that increase, almost three quarters in total, occurred before man began to 'poison' his world with industrial processes and the accompanying greenhouse gas emissions in the second half of the twentieth century. So should we pay any attention to those stories that scream out at us from billboards and television news headlines, claiming that man, with his inexhaustible dependence on oil-based machinery and ever more sophisticated forms of transport is creating a nightmare level of greenhouse gas emissions, poisoning his environment and ripping open the ozone layer? Doubters point to scientific evidence, which can prove that, of all the greenhouse gases, only two percent come from man-made sources, the rest resulting from natural emissions.

Who, then, to believe: the environmentalist exhorting us to leave the car at home, to buy re-usable products packaged in recycled paper and to plant trees in our back yard? Or the sceptics, including, of course, a lot of big businesses who have most to lose, when they tell us that we are making a mountain out of a molehill? And my own opinion? The jury's still out as far as I am concerned!

Questions 11–15

Choose the correct letter, A, B, C or D.

11. The author ...

- A believes that man is causing global warming
- B believes that global warming is a natural process
- C is sure what the causes of global warming are
- D does not say what he believes the causes of global warming are

12. As to the cause of global warming, the author believes that ...

- A occasionally the facts depend on who you are talking to
- B the facts always depend on who you are talking to
- C often the facts depend on which expert you listen to
- D you should not speak to experts

13. More than 80% of the top meteorologists in the United States are of the opinion that...

- A global warming should make us lose sleep
- B global warming is not the result of natural cyclical changes, but man-made
- C the consequences of global warming will be devastating
- D global warming is not man-made, but the result of natural cyclical changes

14. Our understanding of weather ...

- A leads to reliable predictions
- B is variable
- C cannot be denied
- D is not very developed yet

15. Currently, Dr James Hansen's beliefs include the fact that ...

- A it is nearly impossible to predict weather change using artificial models
- B the consequences of global warming would be disastrous for mankind
- C there is a significant link between the climate now, and man's changing of the atmosphere
- D Earth is getting colder



READING PASSAGE 4

You should spend about 15 minutes on Questions 16–20, which are based on Reading

Passage 4 below.

A. The medical profession is currently under siege as never before with a spate of high profile malpractice cases. This attack is taking place at a time when the National Health Service is undergoing a 'culture change' brought about by a shift in the public's attitudes to authority, in general, and, more specifically, by the demystification of medicine. The perception that doctors are a race apart is finally beginning to wane.

B. These forces have, fortunately, already led to a number of radical developments in the last five or six years in the way doctors are being trained, with greater emphasis now being laid on a more patient-oriented approach. Whilst, in the past, communicating effectively with patients was left basically to chance, this is no longer the case. As part of their final assessment, doctors now have to take a practical examination where their communication as well as clinical skills are carefully scrutinised.

C. If you ask most people what makes a good doctor, they will not say someone with sound medical knowledge. The first thing that will spring to mind is a good bedside

manner; in other words, good communication skills. But what does a good bedside manner, or communication skills, entail?

D. All too often people complain about the lack of sensitivity of the doctors they encounter whether they be generalists or specialists. Some other frequently voiced criticisms are that doctors sound as if they are delivering a lecture when talking to patients; pontificating from on high. Or that they lack basic social skills; or indeed that they are bad listeners, concerned only with delivering their message rather than becoming involved with any kind of negotiation with the patient. So it would be safe to say that the most important aspect of a good bedside manner is good interpersonal skills.

E. From the patients' point of view, the interaction they have during their consultation with a doctor is very, personal and hence emotional, while for the doctor it is merely a logical and objective process. And so, the chances of the doctor/ patient communication breaking down are high if the doctor is not sufficiently skilled in handling the patient's emotional needs. A doctor must be able to deal with the full range of a patient's feelings, showing sympathy and empathy especially when handling difficult situations, like breaking bad news etc.

F. Another aspect of the good bedside manner, which is more often than not overlooked, is having the ability to talk to patients using lay language that they understand, while, at the same time, avoiding any hint of condescension, or being patronising. The inability to do this has a number of effects. When doctors use medical jargon, patients feel that they are trying to hide something. Doctors can also give the impression that they do not know what they are talking about; or even that they do not know the solution to a problem.

G. It is also essential that the doctor at all times is able to maintain authority. For example, doctors need to deal with some patients' belief that medicine is infallible, i.e. that the doctor has the panacea for every woe! This is certainly no easy task, as most people's expectations are raised by the daily diet of wondrous developments in medicine.

H. The other side of the coin is that, as people's awareness and knowledge have increased, albeit often misinformed by the Internet etc, the stronger their doubts about the medical profession have become. And coupled with the rise in general educational awareness, the public have consequently a lower regard for doctors. This, in turn, has affected doctors' ability to communicate. They are not able to hide behind the veneer that technical jargon created.

I. At last, the pendulum has swung in the patient's direction. The onus is now upon doctors to adapt themselves to the patient's needs rather than the patient approaching some awesome god-like figure. The veil has been lifted and the temple violated.

Questions 16–20

Choose the correct letter, A, B, C or D.

16. The change in people's attitude to authority has, in part, ...

- A Mystified medicine
- B Improved medical training considerably
- C affected people's feelings about authority
- D effected a cultural change in the health service

17. Which of the following statements is true according to the information in the passage

- A Doctors need to be able to use lay language With patients and, at the same time, to avoid talking down to the patient
- B Doctors do not need to be able to use lay language with patients; nor to avoid being condescending to the patient
- C For doctors, the use of lay language with patients is not important
- D For all medical personnel. the use Of lay language with patients is important

18. How would you describe the writer's attitude to the changes in medical training?

- A He is in- two-minds about the changes
- B He is against the changes
- C He is luke-warm about the changes
- D He is for the changes

19. Which of the following is the most suitable title for the passage?

- A A change of emphasis in the doctor/patient relationship
- B The patient's perspective
- C An overview of medical training
- D A panacea for all ills

20. The author wrote the passage

- A to criticise the new developments in medicine
- B to show how the public's shift in attitude to doctors has brought about changes in the doctor/patient relationship
- C to show how the medical profession needs to be changed
- D to blame the medical profession for society's ills

Appendix E

Interview Protocol

- **Self-efficacy Sources and Reading Comprehension**

- 1) **Mastery Experience**

- a) How does your personal successful experience regarding reading affect your current reading comprehension performance?
- b) How does your personal unsuccessful personal experience regarding reading affect your current reading comprehension performance?

- 2) **Vicarious Experience**

- a) How does someone's good performance in reading affect your reading comprehension performance?
- b) How does someone's poor performance in reading affect your reading comprehension performance?

- 3) **Verbal Persuasion**

- a) How do positive feedback or comments from teachers, parents or fellow students affect your reading comprehension?
- b) How do negative feedback or comments from teachers, parents or fellow students affect your reading comprehension?

- 4) **Physiological State**

- a) How often do you feel nervous or tired when reading a text? Why do you feel so?
- b) How does nervousness or tiredness affect your reading comprehension?

- **Metacognitive Reading Strategies and Reading Comprehension**

- 5) **Global Reading Strategies**

- a) How does having a purpose while reading help you comprehend the text better?
- b) How does using past knowledge while reading help you comprehend the text better?
- c) How does skimming the text while reading help you comprehend the text better?
- d) How does guessing while reading help you comprehend the text better?

6) Problem-solving Reading Strategies

- a) How does reading the text slowly help you comprehend the text better?
- b) How does rereading the text help you understand the text better?
- c) How does visualization help you understand the text better?
- d) How does guessing the meaning of unknown words help you understand the text better?

7) Support Reading Strategies

- a) How does taking notes while reading help you understand the text better?
- b) How do reference materials help you understand an English text better?
- c) How does underlining the text help you understand an English text better?
- d) How does translating the text from English to Arabic help you understand an English text better?



Appendix F

Sampling Determination Table

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	373
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	225	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note. N=population size; S=sample size. Adapted from “Determining sample size for research activities” by R.V. Krejcie & D.W. Morgan. 1970, *Educational and psychological measurement*, 30(3), 607-610. Copyright 1970 by Sage.

Appendix G

Missing Values

	Statistics	
	Valid	Missing
ME1	382	1
ME2	383	0
ME3	383	0
ME4	382	1
VE1	383	0
VE2	383	0
VE3	383	0
VE4	383	0
VE5	382	1
VE6	383	0
VP1	382	1
VP2	383	0
VP3	382	1
VP4	383	0
PS1	383	0
PS2	382	1
PS3	383	0
PS4	383	0
GL1	383	0
GL2	383	0
GL3	383	0
GL4	382	1
GL5	383	0
GL6	382	1
GL7	383	0
GL8	383	0
GL9	382	1
GL10	383	0
GL11	383	0
GL12	383	0
GL13	383	0
PSS1	383	0
PSS2	383	0

PSS3	383	0
PSS4	383	0
PSS5	383	0
PSS6	383	0
PSS7	383	0
PSS8	383	0
SEB1	383	0
SEB2	383	0
SEB3	383	0
SEB4	383	0
SEB5	383	0
SEB6	383	0
SEB7	383	0
SEB8	383	0
SEB9	383	0
SEB10	383	0
SP1	383	0
SP2	383	0
SP3	383	0
SP4	383	0
SP5	383	0
SP6	383	0
SP7	383	0
SP8	383	0
SP9	383	0
RC1	383	0



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Appendix H

Series Mean Method

	Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases	Creating Function
			First	Last		
1	ME1_1	1	1	383	383	SMEAN(ME1)
2	ME4_1	1	1	383	383	SMEAN(ME4)
3	VE5_1	1	1	383	383	SMEAN(VE5)
4	VP1_1	1	1	383	383	SMEAN(VP1)
5	VP3_1	1	1	383	383	SMEAN(VP3)
6	PS2_1	1	1	383	383	SMEAN(PS2)
7	GL4_1	1	1	383	383	SMEAN(GL4)
8	GL6_1	1	1	383	383	SMEAN(GL6)
9	GL9_1	1	1	383	383	SMEAN(GL9)



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Appendix I

Consent Letter for Data Collection



AWANG HAD SALLEH
GRADUATE SCHOOL OF ARTS AND SCIENCES
UUM College of Arts and Sciences
Universiti Utara Malaysia
06010 UUM SINTOK
KEDAH DARULAMAN
MALAYSIA



Tel.: 604-928 5200/5268/5251
Faks (Fax): 604-928 5297
Laman Web (Web): <http://ahsgs.uum.edu.my>

"MUAFAKAT KEDAH"

UUM/CAS/AHSGS/901633
August 15, 2017

TO WHOM IT MAY CONCERN

Dear Sir/Madam

DATA COLLECTION FOR PROJECT PAPER/ THESIS

This is to certify that **Muhammad Waleed Shehzad (matric number: 901633)** is a full-time graduate student in Doctor of Philosophy (Applied Linguistics) at UUM College of Arts and Sciences.


He needs to do his field study and data collection for his project paper/thesis in order to fulfill the partial requirements of his graduate studies.

We sincerely hope that your organization will be able to assist him in the data collection and the distribution of the questionnaires for his research.

Thank you.

"KNOWLEDGE, VIRTUE, SERVICE"

Yours faithfully


MOHD KHAIRY MUKHTARUDDIN
Senior Assistant Registrar
for Dean
Awang Had Salleh Graduate School of Arts and Sciences
UUM College of Arts and Sciences

Universiti Pengurusan Terkemuka
The Eminent Management University



Appendix J

Form of Consent

This form is intended to seek your permission to participate in an interview. Please read the following statement and sign your name, indicating your approval.

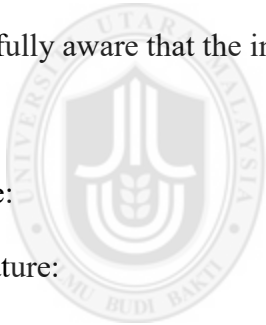
I hereby declare that I agree to participate in an interview session that will be conducted by Muhammad Waleed Shehzad. I am well informed about the purpose of the interview.

I am fully aware that the interview session is taped recorded and confidential.

Name:

Signature:

Date:



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Appendix K

Form of Validation

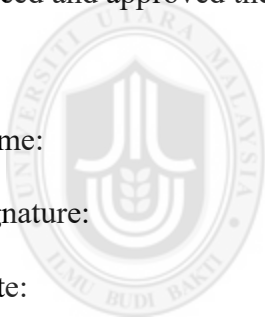
This form is intended to verify interview transcriptions. Please read the following statement and sign your name, indicating your approval.

I hereby declare that I have proofread the interview transcription given to me. I have agreed and approved the interview transcription.

Name:

Signature:

Date:



Appendix L

Transcription of the Interviews

1 st Nov, 2017(11:15am)		Student One (S1)	Location:Qassim University
People	Responses		
Interviewer Q1(a)	How does your personal successful experience regarding reading affect your current reading comprehension performance?		
Interviewee	I had many successful experiences in terms of reading and I believe that those experiences really improve my reading performance.		
Interviewer	*Probing question: Can you share any experience in which you performed very well in reading.		
Interviewee	What I remember was like when I read, I read all the time like repeat, repeat. That's what makes me improve in reading the passage. When I do that I can easily comprehend the text and get good marks in reading exam. You know, whenever I do any reading exercise in class or take reading test in exam at first I become nervous and I get confused and don't know what to do. But then when I remember the previous experience of reading the text many times, repeat and repeat and ultimately I get the meaning of passage and get good marks in reading comprehension exam. That's it.		
Interviewer Q1(b)	How does your personal unsuccessful personal experience regarding reading affect your current reading comprehension performance?		
Interviewee	Well [long pause] actually I remember that I faced a lot of problems in reading because of grammar and it really affected my reading performance. Sometimes, I didn't get the meaning of the text and I used to get confused in reading tasks because of poor grammatical skills. Surely those poor performances because of poor vocabulary and grammatical skills would lower my reading performance of today.		
Interviewer Q2(a)	How does someone's good performance in reading affect your reading comprehension performance?		
Interviewee	When I see someone performing well in reading, I ask myself that if he can do it, why can't I? So, that thought keeps me going and I work hard to improve my reading performance.		
Interviewer Q2(b)	How does someone's poor performance in reading affect your reading comprehension performance?		
Interviewee	Well, it depends on the situation. Sometimes, I have rivalry with some students and if those students doesn't perform well then it doesn't decrease my confidence. Whereas, generally, if some student is not able to perform well, it decreases my confidence and maybe it would affect my performance eventually.		
Interviewer Q3(a)	How do positive feedback or comments from teachers, parents or fellow students affect your reading comprehension?		
Interviewee	Yes, my teachers use to say words like 'great' or something whenever I perform well in reading tasks.		

Interviewer	*Probing question: *PQ: How do you feel when they say such words?
Interviewee	When I hear those words, I feel confident. It's a good thing.
Interviewer	*Probing question: How that praise affected your reading comprehension performance?
Interviewee	They give you confidence. Sometimes, when you read in front of your parents and when they see you reading non-stop. They say, "Masha Allah, you are improving and we can see you improving in front of us". This really motivates me and boosts me and I work hard in reading and eventually my reading performance gets better.
Interviewer Q3(b)	How do negative feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	Yes, sometimes I receive negative comments from my teachers. But, those negative comments does not decrease my confidence regarding my reading performance.
Interviewer Q4(a)	How often do you feel nervous or tired when reading a text? Why do you feel so?
Interviewee	Well, during a reading exam, I become nervous on whether I can answer these questions or not because I have not enough time. In reading specifically, first, I think that I need to read fast and I don't have enough time but when I feel confident, I feel I can read, I have enough time, I have everything. I can read the questions over and over.
Interviewer Q4(b)	How does nervousness or tiredness affect your reading comprehension?
Interviewee	Sometimes when you are nervous, you skip words. For instance, if there is 'S' in the end of a word, but you can't see it. So, you make mistakes like this.
Interviewer Q5(a)	How does having a purpose while reading help you comprehend the text better?
Interviewee	Yes, sometimes I have a specific purpose. For instance, I read the novel to get enjoyment and when I read with enjoyment I don't find the text difficult
Interviewer Q5(b)	How does using past knowledge while reading help you comprehend the text better?
Interviewee	Yes, I use my past knowledge and it helps me a lot. For example, if the passage is about airport, I would imagine everything about airport and would recall important information related to it. This way I would be able to understand the text better.
Interviewer Q5(c)	How does skimming the text while reading help you comprehend the text better?
Interviewee	Yes, I do skimming. Skimming means getting the main idea of the passage. I use it to read a passage fastly.
Interviewer Q5(d)	How does guessing while reading help you comprehend the text better?
Interviewee	Yes, I make use of guessing technique. Actually, most of the time, when the writer writes any essay or topic, all the paragraphs are connected to

	each other. So I can easily predict that what the next paragraph would be about.
Interviewer Q6(a)	How does reading the text slowly help you comprehend the text better?
Interviewee	I keep on reading the text slowly until I get the meaning of the passage. It really helps me to understand the text better because I spend more time on it.
Interviewer Q6(b)	How does rereading the text help you understand the text better?
Interviewee	I read the text again and again until I get the meaning. It's really helpful. Every time I read the passage or sentence, it becomes clear.
Interviewer Q6(c)	How does visualization help you understand the text better?
Interviewee	I do visualization most of the time. It really helps me in understanding the passage because the whole scene comes in front of my eyes about the topic.
Interviewer Q6(d)	How does guessing the meaning of unknown words help you understand the text better?
Interviewee	Guessing is really helpful in understanding the text. Sometimes, I come across words which are new to me and I don't know their meaning. Then I guess their meaning by looking at the context of sentence or paragraph.
Interviewer Q7(a)	How does taking notes while reading help you understand the text better?
Interviewee	Yea, I take notes sometimes. If I don't take notes, I will forget many important details when I read it next time and that would be bad for my comprehension. Sometimes, I also take notes in Arabic to remember because it is easy to understand something if I relate it to Arabic.
Interviewer Q7(b)	How do reference materials help you understand an English text better?
Interviewee	Mostly, I use internet and it's really helpful. I can find everything on internet and it helps me in understanding the passage.
Interviewer Q7(c)	How does underlining the text help you understand an English text better?
Interviewee	I actually highlight different words sometimes with highlighter. Because I fear that these words are important and they can come across me again in future. If I know these words already then I would understand whatever passage comes in exam. That's why I highlight them and look for their meaning in dictionary.
Interviewer Q7(d)	How does translating the text from English to Arabic help you understand an English text better?
Interviewee	Sometimes, I translate and sometimes and I don't. Sometimes, I translate from English to Arabic because it's easier to understand the text. However, sometimes there are some words in English which we can't translate in Arabic and I leave them as they are. In this case, I can still understand the text.

3 rd Nov, 2017 (10:00 am)	Student Two (S2)	Locaton: King Saud University
Interviewer Q1(a)	How does your personal successful experience regarding reading affect your current reading comprehension performance?	
Interviewee	Yea, actually when I took an exam three weeks ago, there was a passage about football. So, I did really well in that because I know almost everything about football and I like it. So, I knew a lot of vocabularies about football. So, I did well and I answered a lot of questions because in that exam there were three passages and the first passage was about football and it has 13 questions. So, I answered all 13 questions correctly. I will be more confident in reading in the future because of that experience that I have just told you. Actually, I have interest in football and if anything similar to that topic comes again, I will do well hopefully.	
Interviewer Q1(b)	How does your personal unsuccessful personal experience regarding reading affect your current reading comprehension performance?	
Interviewee	A few days back, I got a topic about anthropology in the reading exam and I had no idea about it. So, how could I answer about it when I didn't know about it, not even in Arabic. So, how could I answer it in English? Secondly, a lot of vocabulary about anthropology was there in that passage that I didn't know about and I didn't know what does it mean. So, I didn't do well in that test. So, when I see this topic now, I always say to myself, "O, that's the topic in which I didn't do well when I took the exam". Then after the exam, I decided to get the main idea about it and also when I finished exam, I google it and took the main idea about anthropology in Arabic, then I came to know about it.	
Interviewer	*Probing question: How this unsuccessful experience would affect your reading comprehension performance?	
Interviewee	I think I would be more confident after that bad reading experience and of course, it's not gonna reduce my reading performance in the future. Rather, I feel good that I learnt something new and I am ready to learn new things in the future.	
Interviewer Q2(a)	How does someone's good performance in reading affect your reading comprehension performance?	
Interviewee	Actually, to be honest, I would feel a bit jealous because I would think that he knows more than me about English language or reading. And that's why when I would get home, I would read a lot and also I have got a book at home about 'International geographic' that I read daily and I love reading that book. So, it would increase my confidence and I would think that I can do the same, what he did.	
Interviewer Q2(b)	How does someone's poor performance in reading affect your reading comprehension performance?	
Interviewee	I think I would feel sorry for him. I would like to help him and teach what I know about reading. I would like to give him a book to read and to increase his knowledge about it.	

Interviewer	*Probing question: How that would affect your reading comprehension performance?
Interviewee	Of course, I would teach reading to him and teaching him would make my reading good.
Interviewer Q3(a)	How do positive feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	Actually, I have been to England for about one and half month and my teacher told me [pause] He asked us (the class) to do reading comprehension exercise and I did very well. I didn't do any mistake. So, he asked me, "How did you answer all the questions correctly?" I told him that I read books every day and it improves my reading. So, because of those motivational words, I hope to perform really well in the reading comprehension tasks in the future as well because he motivated me. And of course, I will do much better because when I do something, I would remember that yes my teacher supported me and said words like, "you did well and blah blah".
Interviewer Q3(b)	How do negative feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	To be very honest, up till now I didn't receive negative or bad words from anyone regarding my reading. But, if that happens and my teacher says bad words to me regarding my reading then I would remain absent in the next class due to embarrassment because if someone utters bad words to me, especially if he/she is one of my parents or a teacher. That will affect my brain because I expect good words from them because when they say good words to me, I would be a better man. So, yea I won't be able to perform well in reading after those comments.
Interviewer Q4(a)	How often do you feel nervous or tired when reading a text? Why do you feel so?
Interviewee	Actually I feel nervous quite often especially when I am taking an exam because there is not enough time.
Interviewer Q4(b)	How does nervousness or tiredness affect your reading comprehension?
Interviewee	Well [pause] in the reading exam, I have just one hour for 3 passages and 40 questions to attempt. [pause] So when I am answering the questions, I feel that time is running out. So, I have to get the main idea. So, I feel nervous and when I am nervous, I can't answer the questions because I am unable to think properly.
Interviewer Q5(a)	How does having a purpose while reading help you comprehend the text better?
Interviewee	I always have a purpose in mind before reading something. For instance, I used to read 'International geographic' book when I was in England. So I had a purpose of reading that book because I had to appear in IELTS exam. And that book has a lot of academic words in it. So, it proved to be very useful in my IELTS exam preparation.
Interviewer Q5(b)	How does using past knowledge while reading help you comprehend the text better?

Interviewee	I activate my prior knowledge for sure. For example, I remember that I have watched a video on Youtube related to DNA in human body. So, when I read DNA topic in my book, at that time I use my previous knowledge that I gathered by watching video. So, it was very helpful.
Interviewer Q5(c)	How does skimming the text while reading help you comprehend the text better?
Interviewee	Skimming helps you in a way that you don't waste your time and it helps you to get the main idea of the passage. Specially, if you are taking an IELTS exam, that would help you. So, skimming and scanning are the most important.
Interviewer Q5(d)	How does guessing while reading help you comprehend the text better?
Interviewee	Yea, guessing like if there's a question about filling the gap and I have to predict what's it gonna be in the gap e.g. adjective, verb or noun. That really helps me and prediction or guessing is useful.
Interviewer Q6(a)	How does reading the text slowly help you comprehend the text better?
Interviewee	Yes, I read slowly usually because when I read it slowly, I can get the main idea easily because I will read every single word. If I read quickly, it's difficult to get main idea.
Interviewer Q6(b)	How does rereading the text help you understand the text better?
Interviewee	Well [pause] yea I actually reread the text. Especially, if that's important and I have interest in that subject and if I don't get the main idea then I am gonna reread it.
Interviewer Q6(c)	How does visualization help you understand the text better?
Interviewee	Visualizing while reading helps a lot. I always imagine the situation that was presented in the text. And it's really helpful in understanding the text.
Interviewer Q6(d)	How does guessing the meaning of unknown words help you understand the text better?
Interviewee	I usually guess the meaning of words from the context. When you know the context, it's easy to guess the meaning of unknown words.
Interviewer Q7(a)	How does taking notes while reading help you understand the text better?
Interviewee	I don't take notes usually. I take notes rarely when it's most important. For instance, if I read any concept or difficult word, I take notes. So that I can understand it better when I read it next time.
Interviewer Q7(b)	How do reference materials help you understand an English text better?
Interviewee	I don't use reference material or dictionary too much. Mostly, I try to get the meaning by taking help from context or so.
Interviewer Q7(c)	How does underlining the text help you understand an English text better?

Interviewee	While reading there are some words or lines that I can't understand properly. So, I underline them to refer back to them later. When I read them again after knowing their meaning I get the whole text easily.	
Interviewer Q7(d)	How does translating the text from English to Arabic help you understand an English text better?	
Interviewee	Currently I don't translate from English to Arabic but before like two years ago when I was in school, I didn't know how to use English. So at that time, I used to translate from English to Arabic but now I don't do that.	
4th Nov, 2017 (11:30 am)	Student Three (S3)	Location: Prince Sattam bin AbdulAziz University
Interviewer Q1(a)	How does your personal successful experience regarding reading affect your current reading comprehension performance?	
Interviewee	In the first semester, when I came to this university's preparatory year programme (PYP), I had a very good lecturer. He taught me everything, I paid attention on reading skills and specifically capital letters and you know I got very good marks in the final reading exam of first semester of PYP. After that amazing result in reading exam my confidence in reading got boosted up and now I am very good in reading and I hope I can do better because of that experience.	
Interviewer Q1(b)	How does your personal unsuccessful personal experience regarding reading affect your current reading comprehension performance?	
Interviewee	Yes, I remember when I was in high school. At that time I used to perform poorly in reading tasks. However, that didn't affect my reading confidence in a negative way because I know it's not a problem from my side. It's from the teacher's side and he didn't teach me well and he just used to waste time. He wasn't a good teacher actually. So, that bad experience won't affect my reading performance badly. Also, I started studying reading English in sixth grade. You know, its really late.	
Interviewer Q2(a)	How does someone's good performance in reading affect your reading comprehension performance?	
Interviewee	I think I got confidence in reading from my sister because if I face any difficulty in reading, I used to consult her and she taught me really well and I understand her completely. I also get confidence from my classmates. Usually if any of my classmates performs well in reading I approach him and ask him what I don't know about reading. So, my sister and some of my classmates are source of my good reading performance.	
Interviewer Q2(b)	How does someone's poor performance in reading affect your reading comprehension performance?	
Interviewee	No, it won't affect my reading. Rather I will ask him, "why you performed bad or got lower grades in reading?" I will also teach him what I know and support him. I will make sure that he gets high grades in future. At the end of day, I will get better in reading as well because if I have to teach someone, I have to prepare myself really well.	

Interviewer Q3(a)	How do positive feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	I had never received good remarks from teachers when I was in school. But in university, even if I do a small reading task correctly then teachers appreciate and say good words to me. That is why I have improved my reading a lot in university because those good words from teachers keep me on track
Interviewer Q3(b)	How do negative feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	I have never got negative feedback related to reading. However, if any teacher would give me negative feedback about my reading, I would say, “that’s your opinion and I am gonna respect your opinion but this is not me”. So those negative comments would not affect my reading confidence I think.
Interviewer Q4(a)	How often do you feel nervous or tired when reading a text? Why do you feel so?
Interviewee	Actually, I don’t feel nervous at all.
Interviewer Q4(b)	How does nervousness or tiredness affect your reading comprehension?
Interviewee	I have never felt nervous because if I would get nervous then my reading exam’s result would be bad. So, that’s why one should relaxed to get good results.
Interviewer Q5(a)	How does having a purpose while reading help you comprehend the text better?
Interviewee	I always believe that if my purpose of reading something is clear, then I would understand better. I have a purpose like, I want to know what the writer would talk about in the passage? What’s the subject? Something like that.
Interviewer Q5(b)	How does using past knowledge while reading help you comprehend the text better?
Interviewee	Yes, I use my past knowledge while reading. For example, if the passage is about something that I adore like football, I would say, “O, he is talking about the football club that I support and they have very good players”. You know something like that. This past knowledge is really helpful in reading a passage because it opens your mind and easy for you to understand.
Interviewer Q5(c)	How does skimming the text while reading help you comprehend the text better?
Interviewee	Yes, I do skimming. I told you earlier that I read, I understand and I get the main idea of the passage.
Interviewer Q5(d)	How does guessing while reading help you comprehend the text better?
Interviewee	Yes, I make predictions like, I can predict what’s next paragraph is gonna be about. Like, if you get the main idea, you get the topic sentence, then the supporting sentence.

Interviewer Q6(a)	How does reading the text slowly help you comprehend the text better?
Interviewee	Yea, I read slowly and if any difficult word, I cut it into two to three parts to make it easy to read.
Interviewer Q6(b)	How does rereading the text help you understand the text better?
Interviewee	Yes, I read the text again because I have to understand the passage. So, after reading a passage many times, I get the meaning.
Interviewer Q6(c)	How does visualization help you understand the text better?
Interviewee	Yes, I visualize while reading a passage. For example, if the passage is about 'airports', I would remember my nice days when I travelled to other country. So, I relate the reading topic with my own experience. It really helps in understanding the text.
Interviewer Q6(d)	How does guessing the meaning of unknown words help you understand the text better?
Interviewee	Yes, I guess the meaning by taking help from the passage. I read the passage and I guess the meaning of unknown words from context of the passage. It's really helpful because if you know the meaning of words, only then you would come to know about the main idea of the passage.
Interviewer Q7(a)	How does taking notes while reading help you understand the text better?
Interviewee	I take notes only if something important comes across me. It helps me to remember different words or concepts. For example, when I can use these notes when I am in the car and traffic gets jammed. So, I could have a look at these notes and understand everything quickly. Also, it could save a lot of time.
Interviewer Q7(b)	How do reference materials help you understand an English text better?
Interviewee	Yes, actually, I have dictionary in my phone. I use it usually so that I don't have to ask the meaning of word from teacher.
Interviewer Q7(c)	How does underlining the text help you understand an English text better?
Interviewee	Yes, I underline the text because it helps me to remember different words or concepts. If you look at the passage, your eye is gonna be look at the important words, and I underline those words and if you underline those words at that time then it's easy to look for the important words later.
Interviewer	*Probing Question: How does it affect your reading comprehension?
Interviewee	Important words are crucial for understanding the passage. That's why.
Interviewer Q7(d)	How does translating the text from English to Arabic help you understand an English text better?
Interviewee	Yes, I always translate from English to Arabic because it's gonna be easy to understand [Pause] the thought.

7 th Nov, 2017 (9:15 am)	Student Four (S4)	Location: Majmaah University
Interviewer Q1(a)	How does your personal successful experience regarding reading affect your current reading comprehension performance?	
Interviewee	I think in school no one does well in English and specially in reading here in Saudi Arabia because there are no perfect English teachers here. So, we don't do well at school. But in university's Preparatory Year Programme (PYP), just for 4 or 5 months, we change to really good in English reading.	
Interviewer	*Probing question: So as you told me that you have improved a lot in the first semester of PYP (in the last 5 to 6 months). Because of these good improvement in first semester, do you get confidence that you can do well in reading in future?	
Interviewee	Yea, I can do well because I have improved a lot and there is nothing that could stop me to perform well. Credit goes to the teachers of my university who focused on teaching us the main reading strategies like, skimming, scanning and using background knowledge to improve our reading.	
Interviewer Q1(b)	How does your personal unsuccessful personal experience regarding reading affect your current reading comprehension performance?	
Interviewee	I think in high school I used to perform really bad in all the reading tests because there we didn't do anything regarding reading because our teachers didn't teach us about reading. I still remember we use learn everything by heart and we had no understanding. Whenever I remember that high school time, it lowers my reading confidence for sure and effects my reading performance negatively.	
Interviewer Q2(a)	How does someone's good performance in reading affect your reading comprehension performance?	
Interviewee	Initially, I will feel bad and it would greatly lower my reading confidence because most of my classmates come from cities and I belong to a small village. There is a difference in standard of education between cities and villages. In village schools, we don't do really well but in cities, it's different. But after sometime, I would become normal and I would think that maybe if he's good in reading, maybe I am better than him in other skills like speaking or writing. That would make me feel better.	
Interviewer	*Probing question: How his good performance would affect your reading comprehension performance?	
Interviewee	Yes, when I know that he is better than me, I would work hard at home, I would try to force myself to do reading exercises and study with my cousins who are good in reading and would ask for help in reading. And also, I will ask my friends if I face problems in reading.	
Interviewer Q2(b)	How does someone's poor performance in reading affect your reading comprehension performance?	
Interviewee	Actually, if any of my classmates doesn't perform well in reading, he can come to me for help and I can ask that what he needs because we	

	are in the same class. So, after two to three months, we can be friends and help each other and the first three months of the university, you come to know about good and bad students and you can choose your friends and help each other.
Interviewer	*Probing question: How that bad performance of your classmate in reading would affect your reading comprehension performance?
Interviewee	If he needs help, I can help him by teaching him the techniques to do reading comprehension test that I know. I will do a lot of preparation to teach him. So, this way my reading performance will get better too.
Interviewer Q3(a)	How do positive feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	Yea, Yea, of course their comments matter a lot! My parents don't care about my English but my teachers do. My teachers tell me like, "Good job, you are the best" or something like this. This makes me feel better and I work harder and of course, it boosts my reading confidence 200% and improve my reading performance.
Interviewer Q3(b)	How do negative feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	I think I have never got negative or depressing words regarding my reading. Teachers in school and university as well just deliver lectures and always praise us. They have never said bad words to us. Either they say, "you are good etc" or they don't say anything.
Interviewer Q4(a)	How often do you feel nervous or tired when reading a text? Why do you feel so?
Interviewee	Of course I feel nervous while doing any reading exercise in exam or class. Maybe, when I read the first time in exam, I feel bad because I know there is not enough time and I don't understand words but after like ten minutes, I read the questions again and again, then I see all the questions clearly.
Interviewer Q4(b)	How does nervousness or tiredness affect your reading comprehension?
Interviewee	Yes, of course, it affects me badly 100%. I read the reading comprehension questions too quickly and thus I can't understand anything. If I am nervous then everything is going to be bad, really bad because I can't focus on the exam. I just [Pause] something happens inside my mind, like I would fail this test, I would be expelled from the university, go back to home. But I hope this nervousness would decrease as I take 2 to 3 exams.
Interviewer Q5(a)	How does having a purpose while reading help you comprehend the text better?
Interviewee	Maybe I have purpose sometimes. It's different every time. For instance, when I am doing reading comprehension exercise in the exam, I read with the purpose that I have to get good marks. So, I read with full concentration. Whereas, other times, I have other purposes like reading for enjoyment.

Interviewer Q5(b)	How does using past knowledge while reading help you comprehend the text better?
Interviewee	Yes, of course. Let's suppose if the passage is about football and I have a vast knowledge about football, I would surely take help from that past knowledge and it would help me absolutely.
Interviewer Q5(c)	How does skimming the text while reading help you comprehend the text better?
Interviewee	No, I am not good at this part. I don't do this.
Interviewer Q5(d)	How does guessing while reading help you comprehend the text better?
Interviewee	I use it like if I am reading a passage regarding health then surely I would know that all the paragraphs in the topic will be about health. So, yes I make predictions this way.
Interviewer Q6(a)	How does reading the text slowly help you comprehend the text better?
Interviewee	I read very [Stress] slowly. I read every single word because this is going to help me to choose the good answer in reading comprehension MCQs. If I read it quickly, maybe I would skip some words or wouldn't understand some words and it would be tough this way. So, for that reason, I read every single word. This way I understand everything.
Interviewer Q6(b)	How does rereading the text help you understand the text better?
Interviewee	If there is time then yea, I read it again. If there is no time in the exam, I try to answer other questions.
Interviewer Q6(c)	How does visualization help you understand the text better?
Interviewee	Yes, of course. I think I have a big mind and I use my imagination for everything. So it's really helpful in reading comprehension as well.
Interviewer Q6(d)	How does guessing the meaning of unknown words help you understand the text better?
Interviewee	Of course, yes! If I don't get the meaning of some words, I read the whole passage and when I read the whole passage, most of the time, I can understand what this word means.
Interviewer Q7(a)	How does taking notes while reading help you understand the text better?
Interviewee	Of course, the notes taking habit is very important because if I doesn't understand any word or like there's a long word like more than 10 letters, then I take notes regarding that word. Because I know these words will come in exam and If I don't know their meanings, how can I understand the whole passage. So, when I go back to home, I try to understand them.
Interviewer Q7(b)	How do reference materials help you understand an English text better?
Interviewee	I use GOOGLE all the time. I think it contains everything in it. I consult dictionary, listen to the correct pronunciation while reading. It helps me a lot.

Interviewer Q7(c)	How does underlining the text help you understand an English text better?
Interviewee	Yes, I underline some difficult words and underlining them helps me in a way that I search for their meaning later after the class.
Interviewer	*Probing Question: How does it affect your reading comprehension?
Interviewee	Important vocabulary is necessary to understand something. That is why I try to underline it so that I don't face any hurdles in understanding in future.
Interviewer Q7(d)	How does translating the text from English to Arabic help you understand an English text better?
Interviewee	Of course! In our school we didn't study English properly. So, from the very beginning up till now, I translate from Arabic to English to get the proper meaning of passage.
9th Nov, 2017 (1:30 pm)	Student Five (S5)
	Location: Al-Imam Mohammed Ibn Saud Islamic University
Interviewer Q1(a)	How does your personal successful experience regarding reading affect your current reading comprehension performance?
Interviewee	I remember in high school, there was a teacher of English and he has worked a lot on my reading skills. He used to pay special attention on me regarding reading skills and vocabulary. He built a strong reading skills foundation and due to that I got selected in this Preparatory Year Programme. I got good marks in PYP entrance reading exam. So, that's the experience I remember and I get huge reading confidence from that experience.
Interviewer Q1(b)	How does your personal unsuccessful personal experience regarding reading affect your current reading comprehension performance?
Interviewee	Actually I didn't experience any negative or bad experience regarding reading because I got A+ grade in school as well as in the first semester PYP reading exam. From the very beginning I used to get more than 90% in English and reading.
Interviewer Q2(a)	How does someone's good performance in reading affect your reading comprehension performance?
Interviewee	Actually, when anybody performs well in reading, at that moment I would feel bad because he is better than me. So, I would study hard and try to improve and develop myself in reading to be like him or close to him.
Interviewer Q2(b)	How does someone's poor performance in reading affect your reading comprehension performance?
Interviewee	Actually, if he's close to me then it would shatter my reading performance as well but if I don't know him, I won't care because I focus on myself always.
Interviewer Q3(a)	How do positive feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	I feel happy when I hear praise about my reading. My teachers here in PYP always praise me and that praise boosts my confidence level and

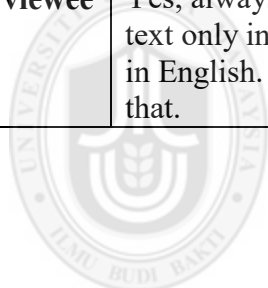
	ultimately I perform well in reading tests. However, I have never heard praise from my parents.
Interviewer Q3(b)	How do negative feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	Surely my reading confidence would get lower because when the teacher utters such words to me and tell me these things, I will feel bad obviously. But that would not affect my reading performance. I would work much harder to get good grades in reading to show my teacher what I am capable of.
Interviewer Q4(a)	How often do you feel nervous or tired when reading a text? Why do you feel so?
Interviewee	Yes, when I read a passage [Pause] actually [Pause] if it's difficult or there is a difficult word, I would actually feel nervous and can't answer questions properly.
Interviewer Q4(b)	How does nervousness or tiredness affect your reading comprehension?
Interviewee	You know, if it's a reading passage about science, biology, bio-chemistry, I would feel nervous because they don't use the words like the words we use in our daily conversation. They use science words, academic words. So, I will feel nervous and as a result it would affect my performance.
Interviewer Q5(a)	How does having a purpose while reading help you comprehend the text better?
Interviewee	Well, my reading purpose changes according to the situation. When I have to read for exam or class assignment then I concentrate too much on every detail as I am preparing for exam. Whereas, when I have free time, I read blogs on internet for leisure.
Interviewer Q5(b)	How does using past knowledge while reading help you comprehend the text better?
Interviewee	Yes, because you know, for instance, when you love swimming and you have all the knowledge about swimming and when you read a passage about swimming. Then, you will easily understand that passage. So, it's really helpful.
Interviewer Q5(c)	How does skimming the text while reading help you comprehend the text better?
Interviewee	Actually, not every time. It depends on the difficulty of the reading passage. If the passage is easy to understand then I read the whole passage quickly. Whereas, if it's difficult, then I use skimming to save time.
Interviewer Q5(d)	How does guessing while reading help you comprehend the text better?
Interviewee	Yes, I make predictions all the time because when I read a paragraph, maybe, the first paragraph talks about the problems then obviously I would know that the next paragraph would be about solutions.
Interviewer Q6(a)	How does reading the text slowly help you comprehend the text better?

Interviewee	It is helpful because when you read slowly then you can focus on minor details and also your thinking becomes stronger. So, if you get all the small details, you can understand the passage surely.	
Interviewer Q6(b)	How does rereading the text help you understand the text better?	
Interviewee	I don't read the passage again.	
Interviewer Q6(c)	How does visualization help you understand the text better?	
Interviewee	I don't imagine while reading. I just read the passage.	
Interviewer Q6(d)	How does guessing the meaning of unknown words help you understand the text better?	
Interviewee	Yes, I guess the meaning from the context because when I read the information before and after that word, I can guess the meaning of that word.	
Interviewer Q7(a)	How does taking notes while reading help you understand the text better?	
Interviewee	Actually, it depends on the topic. If I read the topic and it's about what I love so much, then actually I will take notes and write some of the ideas. I understand it more when I write my ideas about it. But if I read a passage which is not of my interest, then I won't care and just read.	
Interviewer Q7(b)	How do reference materials help you understand an English text better?	
Interviewee	Yes, I use dictionary. It's always in my phone. For instance, if I read some unknown word, I use dictionary to get the meaning of that word. Once I am clear with meaning, I get everything.	
Interviewer Q7(c)	How does underlining the text help you understand an English text better?	
Interviewee	Sometimes, I underline difficult words to translate it to Arabic to understand it better and also later whenever I get time I read it again and again to get its meaning.	
Interviewer Q7(d)	How does translating the text from English to Arabic help you understand an English text better?	
Interviewee	Yes, I translate from English to Arabic but not every time. I only translate when I don't get the meaning of the sentence or word. And I have never tried to translate from English to English.	
10th Nov, 2017 (11:00 am)	Student Six (S6)	Location: Shaqra University
Interviewer Q1(a)	How does your personal successful experience regarding reading affect your current reading comprehension performance?	
Interviewee	Yea, yea! I went to Ireland for a month last year. I studied English there. They let us read and then they tell us what's the mistake and then [Pause] exciting thing about that course was that, we used to work with partners. So, that's quite exciting and improves your English. They let me speak, let me read, let me do everything with my partner. So, the teacher has less doing in the class. And I improved my reading a lot	

	because of that programme in Ireland and whenever I remember that experience, I believe I can do well in reading now.
Interviewer Q1(b)	How does your personal unsuccessful personal experience regarding reading affect your current reading comprehension performance?
Interviewee	Yea, I remember once in a high school, I read a passage and made a lot of mistakes during reading. So the teacher said, “Ok! Any other student answer should read”. At that time I became nervous and embarrassed. So, whenever, I remember that, I get down and become less confident about my reading and I still have that fear of embarrassment in mind that affects my reading performance up till now.
Interviewer Q2(a)	How does someone’s good performance in reading affect your reading comprehension performance?
Interviewee	Yes, in our class, we have some students who do well in English. So, I look at them and I say to myself, “Insha Allah, I will be like them” and then I go to them and talk to them like, “How did you improve your reading, what skills did you get, and how did you get them?” So then some of my classmates told me the techniques that they use while reading. For example, one guy told me that during reading comprehension he used to listen to the recording of that passage as well. So yea, other people who are good in reading really increase my confidence.
Interviewer Q2(b)	How does someone’s poor performance in reading affect your reading comprehension performance?
Interviewee	If I observe someone and he’s not good in reading, I would feel happy because I would feel that I am good than him and that will give me motivation to perform good in reading exam even more.
Interviewer Q3(a)	How do positive feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	Yes, in the university, I hear a lot of good words or remarks from my teachers like, “Yes, you are doing well”. I feel very happy after hearing those words because [Pause] it gives you a positive feeling. It would increase my confidence because when he would say good words about my reading performance, I will feel happy. When I’ll feel happy then I read well and surely like reading.
Interviewer	*Probing Question: How that positive feedback would affect your reading?
Interviewee	It would increase my confidence because when he would say good words about my reading performance, I will feel happy. When I’ll feel happy then I read well and surely like reading.
Interviewer Q3(b)	How do negative feedback or comments from teachers, parents or fellow students affect your reading comprehension?
Interviewee	It would be bad as I said before the teacher in high school said, “O, the other person should read as he is not reading well”. It will decrease my confidence and affect my performance badly and I will hate reading because of those bad words.

Interviewer Q4(a)	How often do you feel nervous or tired when reading a text? Why do you feel so?
Interviewee	I would feel nervous if I haven't prepared the test or when I don't know about the passage. For instance, if the teacher takes a sudden quiz then surely I would feel nervous and can't perform good in reading.
Interviewer Q4(b)	How does nervousness or tiredness affect your reading comprehension?
Interviewee	Well [Pause] I think it wouldn't affect me because after just like five minutes in the exam, I will be okay.
Interviewer Q5(a)	How does having a purpose while reading help you comprehend the text better?
Interviewee	To understand the passage. That's my purpose.
Interviewer Q5(b)	How does using past knowledge while reading help you comprehend the text better?
Interviewee	Of course, past knowledge is helpful and I do that. It helped me a lot of times. If the passage was something related to my past experience, then I'll be happy to read it. And I would use information from my past experience for understanding of passage.
Interviewer Q5(c)	How does skimming the text while reading help you comprehend the text better?
Interviewee	I make use of skimming always because if I want to read the text quickly, it's really helpful. For example, in exams if you don't have time, you can do skimming and get some ideas for that topic or something and you can answer quickly.
Interviewer Q5(d)	How does guessing while reading help you comprehend the text better?
Interviewee	No, I never make predictions. I have never used this strategy.
Interviewer Q6(a)	How does reading the text slowly help you comprehend the text better?
Interviewee	I read slowly to get the meaning of everything and I also read slowly because I am afraid, I might skip something. So, that's why I read slowly to understand every sentence.
Interviewer Q6(b)	How does rereading the text help you understand the text better?
Interviewee	I repeat and read it again and again because sometimes, if I don't understand first sentence, the second sentence after first one will be difficult. So I read every sentence again and again.
Interviewer Q6(c)	How does visualization help you understand the text better?
Interviewee	I always do visualization because when you read the passage and then you don't think about what's in the passage, you won't know anything about it.
Interviewer Q6(d)	How does guessing the meaning of unknown words help you understand the text better?

Interviewee	I guess the meanings quite frequently. Firstly, I read the sentence in which unknown word is present and then if I don't get it, I go to the next sentence and then I repeat it and then I guess its meaning.
Interviewer Q7(a)	How does taking notes while reading help you understand the text better?
Interviewee	No, never!
Interviewer Q7(b)	How do reference materials help you understand an English text better?
Interviewee	When I was in Ireland, I had dictionary with me every time. So, that helped me in understanding written passages a lot because when you know the meaning of some word at the time when you are reading something, then it will remain in your mind forever and if that word is used in any other passage you can get understand what the writer wants to convey.
Interviewer Q7(c)	How does underlining the text help you understand an English text better?
Interviewee	No, I don't underline.
Interviewer Q7(d)	How does translating the text from English to Arabic help you understand an English text better?
Interviewee	Yes, always. I think that's a bad habit but it's difficult to understand the text only in English because it takes a lot of time to understand a word in English. It's a good thing not to translate but I don't have time to do that.



Appendix M

Summary of Research Studies on the Relationship between Self-efficacy Sources and Self-efficacy Beliefs

Studies	Objective(s) of the study	Type and number of participants	Method	Findings	Mastery experience	Vicarious Experience	Verbal Persuasion	Physiological State
					✓	✓	✓	✓
Lin (2016)	Self-Efficacy Beliefs and Their Sources in Undergraduate Computing Disciplines: An Examination of Gender and Persistence	1,073 university undergraduate students majoring in computing science. *Location: Taiwan.	*QUAN S.E Sources measure: Sources of self-efficacy scale (Usher and Pajares, 2009). S.E measure: MSLQ (Pintrich, Smith, Garcia, & Mckeachie, 1993).	1. Regarding gender no significant differences in terms of self-efficacy and self-efficacy sources. 2. All the sources predicted learning self-efficacy beliefs to a large extent. 3. Hierarchical mean values are as follows: vicarious experience (M=4.31), physiological state (M=3.70) verbal persuasion (M=3.49), mastery experience (M=3.29).	✓	✓	✓	✓
Phan (2012)	The Development of English and Mathematics Self-Efficacy: A Latent Growth Curve Analysis	339 3 rd and 4 th grade school students. * Location: Australia.	*QUAN S.E Sources measure: he Sources of Information Questionnaire (Phan&Walker, 2000, 2001b) S.E measure: Academic Self-Efficacy Questionnaire	1. Latent growth modelling has revealed that the students' level of self-efficacy in both the subjects has increased with the passage of time. 2. All the sources were positively and significantly correlated to the self-efficacy beliefs except physiological states, which is negatively correlated. Additionally, mastery experience	✓	✓	✓	—✓

			(Phan & Walker, 2001a)	was the main predictor of self-efficacy beliefs.				
Phan and Ngu (2016)	Sources of self-efficacy in academic contexts: A longitudinal perspective.	328 elementary school students. *Location: Australia.	*QUAN (*Longitudinal study)	The data was collected at 3 different times of one calendar year. The results at time 1 indicated that only vicarious and mastery experience have shown positive significant relationship with self-efficacy. At Time 2, only mastery experience has shown significant relationship. At Time 3, three sources remained significant, i.e., mastery experience, physiological state and verbal persuasion. Moreover, self-efficacy has shown significant relationship with achievement during all the three observations.	Time 1: ✓ Time 2: ✓ Time 3: ✓	Time 1: ✓ Time 2: ✗ Time 3: ✗	Time 1: ✗ Time 2: ✗ Time 3: ✓	Time 1: ✗ Time 2: ✗ Time 3: ✓
Bryant (2017)	Self-Efficacy Sources and Academic Motivation: A Qualitative Study of 10th Graders	18 school students of Grade 10, 3 school teachers, school principal and a guidance counsellor. *Location: USA.	*QUAL Data collection instruments: Data regarding self-efficacy beliefs and self-efficacy sources was collected by using interview protocol.	1. Interview data revealed that self-efficacy beliefs were developed in every student due to the development of self-efficacy sources generally and mastery experience particularly. 2. Efficacy sources growth occurred due to the positive and negative experiences being experienced by them in their life. 3. Development of motivation depends upon perceived self-efficacy of the students that was gained from all the four sources.	✓	✓	✓	✓
Britner and	Sources of Science Self-Efficacy Beliefs of Middle School Students	319 students (155 boys,	*QUAN	1. S.E sources correlated with science self-efficacy.	✓	✓	✓	✓

Pajares (2006)		164 girls) in grades 5–8 in a public middle school. *Location: USA.	S.E Sources measure: Sources of Science Self-Efficacy Scale, (Lent, Lopez, et al., 1996). S.E measure: Science grade self-efficacy scale (Developed by author).	2. Level of Science S.E is same for both genders.				
Usher and Pajares (2009)	Sources of self-efficacy in mathematics: A validation study	Phase 1: 23 Grade 6 students. Phase 2: 824 students of Grade 6, 7 & 8. Phase 3: 803 students of Grade 6, 7 & 8. *Location: USA.	*QUAN S.E Sources measure: Sources of Middle School Mathematics Self-Efficacy Scale (Developed by researchers). S.E measure: Mathematics Skills Self-efficacy Scale (NCTM, 2000).	1. S.E sources are significantly correlated to Maths S.E. 2. Reported hierarchical order of S.E sources: M.E, V.E, V.P, P.S.	✓	✓	✓	✓
Pajares, Johnson & Usher (2007)	Sources of Writing Self-Efficacy Beliefs of Elementary, Middle, and High School Students	1256 school students in Grades 4 to 11. *Location: USA.	*QUAN S.E Sources measure: Sources of Self-Efficacy scale (Lent et al., 1991; Lent, Lopez, et al., 1996).	1. All S.E sources correlated significantly with writing S.E. 2. Girls had higher writing S.E than boys. 3. Girls reported ‘mastery experience’, ‘vicarious experience’ and ‘verbal persuasion’ more than boys,	✓	✓	✓	✓

			S.E measure: The Writing Skills Self-Efficacy scale (Developed by researchers).	whereas boys reported more 'physiological state' than girls.				
Joët, Usher and Bressoux (2011)	Sources of Self-Efficacy: An Investigation of Elementary School Students in France	395 students (200 boys, 195 girls) in Grade 3. *Avg. age: 9.1 yrs. *Location: France	*QUAN S.E Sources measure: Sources of Self-efficacy Scale (Lent et al., 1991). S.E measure: 1) Mathematics Self-efficacy Scale 2) French Self-efficacy Scale.	1. S.E sources except 'vicarious experience' was significantly correlated to French and Mathematics S.E. 2. Reported hierarchical order of S.E sources: V.E, M.E, V.P, P.S.	✓	✗	✓	✓
Arslan (2012)	Predictive Power of the Sources of Primary School Students' Self-Efficacy Beliefs on Their Self-Efficacy Beliefs for Learning and Performance	1049 6 th and 8 th Grade students. *Location: Turkey	*QUAN S.E Sources measure: The Scale of Determining the Sources of Self-efficacy Beliefs (Developed by researcher). S.E measure: The Scale of Self-Efficacy Beliefs for Learning and Performance (Developed by researcher).	1. All S.E sources are significantly correlated to self-efficacy beliefs. 2. Reported hierarchical order of S.E sources: V.P, M.E, P.S, V.E.	✓	✓	✓	✓

Chen and Usher (2013)	Profiles of the Sources of Science Self-Efficacy	1225 students of Middle and High school. *Location: USA	*QUAN S.E Sources measure: Sources of self-efficacy Scale (Usher & Pajares, 2009). S.E measure: Science Self-efficacy Scale (Britner & Pajares, 2001, 2006; Pajares et al., 2000).	<p>1. On the basis of findings of self-efficacy sources, participants were divided into 4 profiles: multi-source profile, mastery profile, moderate profile, and at risk profile.</p> <p>2. Reported hierarchical order of S.E sources: a) Multi source profile: M.E, V.P, V.E, P.S. b) Mastery profile: M.E, V.P, V.E, P.S. c) Moderate profile: M.E, V.E, V.P, P.S. d) At risk profile: P.S, M.E, V.E, V.P.</p> <p>3. S.E level: a) Multi source group had highest S.E level. b) Mastery group had 2nd highest S.E level. c) Moderate group had 3rd highest S.E level. d) At risk group had lowest S.E level.</p> <p>4. All sources are correlated to Science S.E.</p>	✓	✓	✓	✓
Kudo and Mori (2015)	A Preliminary Study of Increasing Self-Efficacy in Junior High School Students: Induced Success and a Vicarious Experience	159 7th graders (81 boys, 78 girls) *Location: Japan	*QUAN *Experimental design (Pre & post-test) S.E Sources measure: a) For ‘mastery experience’: Anagram tasks. b) For ‘vicarious experience’: Performances of the participants S.E measure: Self-efficacy Scale	<p>1. Out of four sources, only master experience and vicarious experience were studied in this study.</p> <p>2. Mastery experience influenced the self-efficacy beliefs of the students.</p> <p>3. Vicarious experience didn’t influence the self-efficacy beliefs of the students.</p>	✓	✗	N/A	N/A

					(Developed by researchers).			
Kaya and Bozdog (2016)	Resources of Mathematics Self-Efficacy and Perception of Science Self-Efficacy as Predictors of Academic Achievement	698 students of 6 th , 7 th and 8 th grade secondary school students *Location: Turkey.	*QUAN S.E Sources measure: The Mathematics Self-Efficacy Resources Scale (Yurt & Sünbül, 2014). S.E measure: The Science and Technology Self-Efficacy Scale (Ilgaz, 2011).	All the four sources of Maths S.E were significantly correlated with Science S.E.	✓	✓	✓	✓
Lin and Tsai (2018)	Differentiating the Sources of Taiwanese High School Students' Multidimensional Science Learning Self-Efficacy: An Examination of Gender Differences	390 High school students of Grades 10, 11 and 12. *Avg. age=16.9 yrs. *Location: Taiwan.	*QUAN S.E Sources measure: The Sources of Science Learning Self-Efficacy Instrument (Developed by Researcher). S.E measure: Science Learning Self-Efficacy Instrument (Lin & Tsai, 2013).	1. Reported hierarchical order of S.E sources: V.E, P.S, V.P, M.E. 2. All the sources of science S.E were significantly correlated with science S.E. However, the correlation was negative for 'physiological state'. 3. Boys' science self-efficacy level was higher than girls. 4. Boys reported more M.E, V.E and V.P than girls. However, girls reported more P.S than boys.	✓	✓	✓	-✓
Tschanne n-Moran and McMaster (2009)	Sources of Self-Efficacy: Four Professional Development Formats and Their Relationship to Self-Efficacy and Implementation of a New Teaching Strategy	93 primary school teachers *Location: USA.	*QUAN (*Quasi-experimental design) S.E Sources measure: (*Note) Sources	1. 'Physiological state' wasn't tested in this study. 2. The level of S.E kept on increasing from treatment 1 to 4. 3. All the three sources influenced self-efficacy beliefs of the teachers.	✓	✓	✓	N/A

			were introduced indirectly during the treatment. S.E measure: (a) Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). (b) Teacher Sense of Efficacy for Literacy Instruction (Tschannen-Moran & Johnson, 2004).					
Hampton and Mason (2003)	Learning Disabilities, Gender, Sources of Efficacy, Self-Efficacy Beliefs, and Academic Achievement in High School Students	278 High school students (150 LD; 128 NLD) *Location: USA.	*QUAN S.E Sources measure: The SASES (Hampton, 1998). S.E measure: The SELS.	1. Self-efficacy Level: LD & NLD: NLD Males had highest S.E level. NLD Females had second highest S.E level. LD females had third highest S.E level. LD males had lower S.E level among all groups. 2. Self-efficacy among all the group were significantly correlated with S.E.	✓	✓	✓	✓

Note. '✓' refers to significant relationship ($p < .05$). '×' refers to insignificant relationship. '-' refers to negative relationship. 'N/A' was used to indicate that relationship between variables was not determined by the study. 'S.E' refers to self-efficacy. 'M.E' refers to mastery experience. 'V.E' refers to vicarious experience. 'V.P' refers to verbal persuasion. 'P.S' refers to physiological state.

Appendix N

Summary of Research Studies on the Relationship between Self-efficacy Beliefs and Metacognitive Strategies

Author	Title of Article	Participants and Location of Study	Study design, Predictor measure and Outcome measure	Findings	Significant / Insignificant
Tuncer and Dogan (2016)	Relationships among Foreign Language Anxiety, Academic Self-Efficacy Beliefs and Metacognitive Awareness: A Structural Equation Modelling	271 Turkish EFL engineering university students. *Location: Turkey	*QUAN S.E measure: The Academic Self-efficacy Scale (Owen & Froman, 1988). Metacognitive strategy measure: Metacognitive Awareness Inventory (Schraw & Dennison, 1994).	1. Negative significant relationship between self-efficacy and metacognitive strategies. 2. SEM is used to analyse results.	—✓
Li and Wang (2010)	An Empirical Study of Reading Self-efficacy and the Use of Reading Strategies in the Chinese EFL Context	139 (87% F & 13% M) Chinese first semester University students majoring in English. *Age: 18 to 22 (Avg. age= 20.34) *Location: China	*QUAN S.E measure: The reading self-efficacy questionnaire (Wang, 2007). Metacognitive strategy measure: The use of reading strategies questionnaire (O'Malley & Chamot, 1990).	1. There is a positive significant relationship between self-efficacy beliefs and the use of reading strategies including metacognitive reading strategies. 2. More reading strategies have been used by the students whose self-efficacy level is high as compared to low self-efficacy students. 3. Metacognitive reading strategies were used most frequently out of three strategies. 4. The level of self-efficacy was above average with the mean of 4.71 out of 7.	✓
Uçar (2016)	The Exploration of the Relationship between Self-Efficacy and Strategy Use in a Turkish Context	150 University Turkish EFL students studying in foreign language department.	*QUAN S.E measure: The self-efficacy scale (Gahungu, 2007).	1. Level of English self-efficacy is high. 2. Metacognitive strategies were employed most frequently out of six strategies.	✓

		*Age: 18 to 23 *Location: Turkey	Metacognitive strategy measure: The language learning strategy use (Oxford, 1990).	3. Positive significant relationship between self-efficacy and the use of reading strategies including metacognitive strategies.	
Yılmaz (2010)	The relationship between language learning strategies, gender, proficiency and self-efficacy beliefs: a study of ELT learners in Turkey	140 (117 F & 23 M) university students majoring in English *Location: Turkey	* QUAN S.E measure: Unknown Metacognitive strategy measure: Strategy Inventory for Language Learning (SILL) (Oxford, 1990).	1. Metacognitive strategies were second most frequently used strategies out of six strategies. 2. More proficient students have used more metacognitive strategies and vice versa. 3. Both male and female students have used the metacognitive strategies equally. 4. Significant positive relationship between the use of metacognitive strategies and self-efficacy beliefs.	✓
Zarei and Gilanian (2015)	Self-efficacy as a Function of Language Learning Strategy Use	147 male and female Iranian university students majoring in English *Location: Iran	* QUAN S.E measure: 1. Sherer's general self-efficacy (SGSES). 2. Academic self-efficacy scale (Chemers, Hu & Garcia, 2001). 3. Bandura's self-efficacy for self-regulated learning scale. Metacognitive strategy measure: a Strategy Inventory for Language Learning (Oxford, 1990).	Metacognitive strategies were positively correlated with academic self-efficacy. However, metacognitive strategies were not correlated with general self-efficacy and self-regulated self-efficacy.	✓
Tavakoli and Koosha (2016)	The Effect of Explicit Metacognitive Strategy Instruction on Reading Comprehension and Self-Efficacy Beliefs: The Case of Iranian University EFL Student	100 (80M & 20F) Iranian university students majoring in English divided into control and experimental groups *Age: 19 to 28 *Location: Iran	* Mixed-methods (*Questionnaire & semi-structured interviews) (*pre & post-test design) S.E measure: (MSLQ) (Printrich, Smith, Garcia, & McKeachie, 1991). Metacognitive strategy measure: SORS	1. Positive and significant relationship of metacognitive instruction with self-efficacy and reading comprehension. 2. Experimental group has outperformed the control group both in reading achievement and self-efficacy.	✓

(Mokhtari & Sheorey, 2002).

Taghinezhad, Dehbozorgi and Esmaili (2015)	The influence of teaching metacognitive reading strategies on the reading self-efficacy beliefs of Iranian EFL learners: an experimental study	90 (49 F & 40 M) Iranian EFL students studying in English learning institute. The students were divided into experimental and control groups. *Age: 18 to 30. *Location: Iran	*QUAN (*pre & post-test design) S.E measure: Reading Self-efficacy Beliefs Questionnaire (RSEQ) (developed by researcher). Metacognitive strategy measure: Metacognitive strategy instruction.	1. Self-efficacy beliefs are positively correlated with the teaching of metacognitive reading strategies. 2. Experimental group outperformed the control group both in reading achievement and self-efficacy. 3. Both male and female students have used the metacognitive strategies on almost equal basis.	✓
Yang and Wang (2015)	Investigating the relationship among language learning strategies, English self-efficacy, and explicit strategy instructions	78 (62 F & 16 M) ESL university students *Age: 18 to 61 (Avg. age= 33.67) *Location: Taiwan	*QUAN (*pre & post-test design) S.E measure: The English learning self-efficacy scale (ELSS) (adapted from (Huang & Chang, 1996). Metacognitive strategy measure: The Strategy Inventory for Language Learning (SILL) (Oxford, 1990).	1. Out of six strategies, metacognitive strategies were used most frequently by both experimental and control group. 2. Students started applying more metacognitive strategies after the strategy instruction. 3. Level of English self-efficacy of both groups remained same after strategy instruction. 4. The relationship between self-efficacy and metacognitive strategy usage became stronger after strategy instruction.	✓
Rahimi and Abedi (2014)	The Relationship between Listening Self-efficacy and Metacognitive Awareness of Listening Strategies	371 High-school students *Location: Iran	*QUAN S.E measure: English Listening Self-efficacy Questionnaire (ELSEQ) (developed by researcher). Metacognitive strategy measure: Metacognitive	1. The level of listening self-efficacy was found to be average. 2. The level of metacognitive awareness of listening strategies was average. 3. Listening self-efficacy is positively and significantly related with metacognitive awareness of listening strategies.	✓

			Awareness Listening Questionnaire (MALQ) (Vandergrift et al., 2006).		
Yailagh, Birgani, Boostani and Hajiyakhchali (2013)	The Relationship Of Self-efficacy And Achievement Goals With Metacognition In Female High School Students In Iran	230 female high school students *Location: Iran	*QUAN S.E measure: MSLQ (Pintrich & colleagues, 1993). Metacognitive strategy measure: Metacognition Awareness Inventory (Schraw & Dennison, 1994).	Self-efficacy beliefs and metacognition are positively correlated to each other.	✓
Nosratinia, Saveiy and Zaker (2014)	EFL Learners' Self-efficacy, Metacognitive Awareness, and Use of Language Learning Strategies: How Are They Associated?	143 (109 F & 34 M) EFL university students majoring in English literature. *Location: Iran	*QUAN S.E measure: General Self-Efficacy Scale (Schwarzer & Jerusalem, 1996). Metacognitive strategy measure: The Metacognitive Awareness Inventory (Schraw & Dennison, 1994).	1. Positive significant relationship between metacognitive awareness and self-efficacy, 2. Positive significant relationship between self-efficacy and metacognitive language strategies usage 3. Positive significant relationship between metacognitive awareness and metacognitive strategies usage.	✓
Kargar and Zamanian (2014)	The relationship between self-efficacy and reading comprehension strategies used by Iranian male and female EFL learners	50 EFL students in language learning institute (28 F & 22 M) *Age: 18 to 25 *Location: Iran	*QUAN S.E measure: General Self-Efficacy Scale (Schwarzer & Jerusalem, 1996). Metacognitive strategy measure: Reading Strategy Use Questionnaire (Adapted from various questionnaires).	1. Positive significant relationship between metacognitive reading strategies and self-efficacy beliefs of the learners. 2. Both male and female students are almost equal in terms of self-efficacy level and the use of metacognitive reading strategies.	✓
Nasari and Zaferanieh (2012)	The Relationship Between Reading Self-efficacy Beliefs,	80 (59 F & 21 M) students majoring in English. *Location: Iran	*QUAN S.E measure: Reading Self-efficacy Beliefs Questionnaire	1. Out of four strategies, metacognitive strategies were ranked as third most frequently used strategies.	✓

	Reading Strategy Use and Reading Comprehension Level Of Iranian EFL Learners		(Ghonsooly & Elahi, 2011). Metacognitive strategy measure: Reading Strategy Use Questionnaire (Adapted from various questionnaires).	2. Gender had no significant relationship regarding self-efficacy and use of metacognitive strategies. 3. Positive correlation of reading self-efficacy with reading comprehension and the reading strategies including metacognitive strategies.	
Zare and Mobarakeh (2011)	The Relationship Between Self-Efficacy and Use of Reading Strategies: The Case of Iranian Senior High School Students	45 grade 3 students. *Age: 17 to 19. *Location: Iran	* QUAN S.E measure: Reading Self-Efficacy Questionnaire (Wang, 2007; Li & Wang, 2010). Metacognitive strategy measure: The use of reading strategies questionnaire (Li & Wang, 2010).	1. Students had appropriate level of self-efficacy with mean score of 47 out of 70. 2. Metacognitive reading strategies were the most frequently used strategies out of three strategies. 3. Self-efficacy beliefs are positively and significantly correlated to the use of reading strategies including metacognitive strategies.	✓
Cera, Mancini and Antoniette (2013)	Relationships between metacognition, self-efficacy and self-regulation in learning	130 high school students *Age: 17 to 20. *Location: Italy	* QUAN S.E measure: Adaptive Self-efficacy Scale (Sibilia, Schwarzer, & Jerusalem, 1995). Metacognitive strategy measure: Metacognitive Awareness Inventory (Schraw & Dennis, 1994).	Positive correlation between metacognition and self-efficacy beliefs.	✓
Keskin (2014)	A Path Analysis of Metacognitive Strategies in Reading, Self-Efficacy and Task Value	370 middle school students of 5 th , 6 th , 7 th and 8 th grade. *Location: Turkey	* QUAN S.E measure: Motivations for Reading Questionnaire (Wigfield & Guthrie, 1997). Metacognitive strategy measure: Metacognitive Awareness of Reading Strategies Inventory	1. Positive significant relationship between self-efficacy and metacognitive strategies. 2. SEM is used to analyse results. 3. Self-efficacy acted as a mediator between metacognitive strategies and task value.	✓

			(Mokhtari & Reichard, 2002).	
Shang (2010)	Reading Strategy Use, Self-Efficacy and EFL Reading Comprehension	53 (36 F & 17 M) university students majoring in English. *Age: 18 to 23 (*avg. age=18.6). *Location: Taiwan	* Mixed-methods (Questionnaires & interviews) S.E measure: Self-efficacy questionnaire was developed by author based on questionnaires of Wong (2005) and Pintrich et al. (1991). Metacognitive strategy measure: SILL (Oxford, 1990).	1. Out of three strategies, metacognitive strategies have been used most frequently. 2. Positive significant relationship between self-efficacy and metacognitive reading strategies use. 3. Metacognitive strategies were not significantly correlated to reading comprehension. 4. Interviews' results have found the particular conditions the students use specific strategies. ✓
Bonyadi, Nikou and Shahbaz (2012)	The Relationship between EFL Learners' Self-efficacy Beliefs and Their Language Learning Strategy Use	210 university students selected from 3 universities. *Age: 19 to 22. *Location: Iran	* QUAN S.E measure: General Self-efficacy Scale (Nezami, Schwarzer, & Jerusalem, 1996). Metacognitive strategy measure: SILL (Oxford, 1990).	1. Out of six strategies, metacognitive strategies were used most frequently. 2. Gender made no significant influence in predicting self-efficacy and use of metacognitive strategies. 3. No significant relationship between self-efficacy beliefs and metacognitive strategies. 4. Those students who studied English for more than 3 years had higher level of self-efficacy than those who studied English for less than 3 years. ✗
Ahmadian and Pasand (2017)	EFL Learners' Use of Online Metacognitive Reading Strategies and its Relation to their Self-Efficacy in Reading	63 (40 F & 23 M) university students majoring in English. *Age 19 to 23 *Location: Iran	* QUAN S.E measure: Reading Self-efficacy questionnaire (Zare & Mobarakeh, 2011). Metacognitive strategy measure: Online Survey of Reading Strategies (Anderson, 2003).	1. Problem-solving online metacognitive reading strategies are most frequently used by the learners. ✓ 2. Significant positive relationship between the learners' perceived use of metacognitive online reading strategies and their self-efficacy in reading comprehension. 3. Females use more global online reading strategies, while males perceive themselves as more self-efficacious in reading online texts.

				4. Learners also used some other metacognitive strategies while reading online.	
Wong (2005)	Language Learning Strategies and Language Self-Efficacy: Investigating the Relationship in Malaysia	74 (61 F & 13 M) graduate (ESL) pre-service teachers from a teachers' college. *Age: 23 to 34 (*avg. age=26.11) *Location: Malaysia	*Mixed-methods (Questionnaires and interview) S.E measure: A Language Self-Efficacy Scale (developed by researcher). Metacognitive strategy measure: Language Learning Strategies Questionnaire (Wong & Siow, 2003).	1. Significant positive relationship between language learning strategies and language self-efficacy. 2. Interview findings were in agreement with the above findings. 3. High self-efficacious pre-service teachers reported more frequent use of more number of language learning strategies than did low self-efficacious pre-service teachers.	✓
Mokhtar (2015)	Influence of language learning strategies on self-efficacy among Malaysian mass comm undergraduates	109 university level Mass Communication students *Location: Malaysia	*QUAN S.E measure: Unknown. Metacognitive strategy measure: SILL (Oxford, 1990).	1. Metacognitive strategies are the most preferred strategies out of all the six strategies. 2. Metacognitive strategies are significantly and positively correlated to self-efficacy beliefs.	✓
Kassem (2015)	The Relationship between Listening Strategies Used by Egyptian EFL College Sophomores and Their Listening Comprehension and Self-Efficacy	84 male and female EFL college sophomores majoring in English. *Avg. age= 20. *Location: Egypt	*QUAN S.E measure: Listening Self-efficacy Questionnaire (developed by researcher). Metacognitive strategy measure: Listening Strategy Questionnaire, developed by researcher based on several questionnaires.	1. Cognitive strategies were used more often by participants, followed by metacognitive and socio-affective strategies. 2. Listening strategies correlated significantly with both listening comprehension and self-efficacy. 3. Participants with high frequent overall strategy use, cognitive strategies and metacognitive strategies outperformed their counterparts with low frequency strategy use in both listening comprehension and self-efficacy.	✓
Ghavamnia, Kassaian and Dabaghi (2011)	The Relationship between Language Learning Strategies, Language Learning Beliefs, Motivation, and Proficiency: A Study of EFL Learners in Iran	80 university undergraduate female students majoring in Applied Linguistics (F) *Age: Early twenties *Location: Iran	*QUAN S.E measure: The Beliefs about Language Learning Inventory (BALLI) (Horwitz, 1988).	1. Out of six strategies, metacognitive strategies were reported to be second most frequently used strategies. 2. Positive significant relationship between strategy use and language learning beliefs.	✓

			Metacognitive strategies measure: SILL (Oxford, 1990).	
Purdie and Oliver (1999)	Language learning strategies used by bilingual school-aged children	58 bilingual school children Age: 9 to 12 *Location: Australia	*Mixed-methods (Structured interviews and questionnaires) S.E measure: Language efficacy questionnaire (developed by researcher) Metacognitive strategies measure: Language learning strategies questionnaire (Oliver and McKay, 1996).	1. Metacognitive strategies were used most frequently. 2. Cultural group, i.e., Asian, Arabic and European didn't make any difference in employing metacognitive strategies. 3. Metacognitive strategies are significantly and positively correlated to language efficacy beliefs. ✓
Jee (2015)	Language learners' strategy use and self-efficacy: Korean heritage learners versus non-heritage learners.	92 Korean as a foreign language (KFL) university students (47M & 45 F) *Age: 18 to 35 (*Avg. age= 20.8) *Location: USA	*QUAN S.E measure: Self-efficacy scale (Gahungu 2010). Metacognitive strategies measure: SILL (Oxford, 1990).	1. Non-heritage students employed metacognitive strategies more frequently as compared to heritage students. ✓ 2. Level of self-efficacy of heritage students (M = 3.35) was higher as compared to non-heritage students (M = 2.83). 3. Regarding the correlations, there were statistically significant positive relationship between self-efficacy and strategy usage.
Sönmez and Durmaz (2017)	Relationship among Efficacy, Strategy Use and Proficiency: Case of Listening in an EFL Classroom	35 university level EFL students majoring in ELT (24F & 11M). *Age: 18 to 30 *Location: Turkey	*QUAN S.E measure: Listening Efficacy Questionnaire. (Rahimi and Abedini, 2009). Metacognitive strategies measure: Listening Strategy Use Questionnaire (Chen, 2010).	Listening self-efficacy found to be positively and significantly correlated to usage of listening metacognitive strategies. ✓ 2. Cognitive and social/effective strategies were employed more frequently as compared to metacognitive strategies.
McCrudden, Perkins and Putney (2005)	Self-efficacy and interest in the use of reading strategies	23 4 th grade students (12M & 11F) *Location: USA	*QUAN (pre/post-test design)	Self-efficacy increased from pre-instruction (M = 18.87, SD = 2.03) to post-instruction (M = 20.78, SD = 2.83). N/A

			S.E measure: Self-efficacy scale (developed by the researcher) Metacognitive strategies measure: Metacognitive reading strategies were taught to the students.	
Stracke (2016)	Language learning strategies of Indonesian primary school students: In relation to self-efficacy beliefs	522 grade 6 students (62% F % 38% M) *Avg. age: 11 years *Location: Indonesia	QUAN S.E measure: The Children's Self-efficacy in Learning English Questionnaire (C-SELEQ) (Developed by researcher). Metacognitive strategies measure: The Indonesian Children's SILL (Gunning's, 1997).	1. Metacognitive strategies were used most frequently. 2. High self-efficacious learners employed more metacognitive strategies than low self-efficacious students. 3. Positive significant relationship between self-efficacy and metacognitive strategies. ✓
Magogwe and Oliver (2007)	The relationship between language learning strategies, proficiency, age and self-efficacy beliefs: A study of language learners in Botswana.	480 primary, secondary and tertiary level students. *Location: Botswana.	QUAN S.E measure: The Morgan-Jinks Student Efficacy Scale (MJSES) Jinks and Morgan (1999). Metacognitive strategies measure: SILL (Oxford, 1989).	1. Out of six strategies, metacognitive strategies were employed most frequently by secondary and tertiary level students. However, primary level students rated them as second most employed strategies. 2. Those students who had high proficiency level were high self-efficacious and vice versa. 3. Positive significant relationship between self-efficacy beliefs and language learning strategies including metacognitive strategies. ✓

Note. '✓' refers to significant relationship ($p < .05$). '×' refers to insignificant relationship. '-' refers to negative relationship. 'N/A' was used to indicate that relationship between variables was not determined by the study.

Appendix O

Summary of Research Studies on the Relationship between Self-efficacy and Reading Comprehension Performance

Author	Title of Article	Participants and location of the study	Study design, Predictor measure and Outcome measure	Findings	Significant/ nsignificant
Al Ghraibeh (2014)	Academic Self-Efficacy in Reading as a Predictor of Meta-comprehension among Arabic Non-native Speakers	63 university level students in Saudi university. *Location=Saudi Arabia.	QUAN S.E measure: Academic self-efficacy test based on (Wang, 2007; Wong, 2005; Henk & Melnick, 1995). Reading achievement measure: Reading achievement test (Moore, Zabrucky & Commander, 1997).	1) Positive and significant correlation between reading self-efficacy and meta-comprehension. 2) Overall, level of reading self-efficacy was high. 3) Largely, level of meta-comprehension was high 4) Age: Level of reading self-efficacy increases with the increase in age.	✓
Aro et al. (2018)	Can reading fluency and self-efficacy of reading fluency be enhanced with an intervention targeting the sources of self-efficacy?	82 primary school students. *Location=Finland	QUAN S.E measure: Self-efficacy of reading fluency questionnaire (Developed by author) Reading achievement measure: 1. Word-Chain Test, ALLU (Lindeman, 1998). 2. Sentence Verification Task, LUKSU (Salmi, Eklund, Järvisalo, & Aro, 2011). 3. Reading-aloud test (Salmi et al., 2011).	Significant and positive relationship between 'reading fluency self-efficacy' and 'reading fluency'.	✓

Booth, Abercrombie and Frey (2017)	Contradictions of Adolescent Self- Construal: Examining the Interaction of Ethnic Identity, Self-Efficacy and Academic Achievement.	874 American students (Black, White, Hispanic and multi-racial). M & F from grades 8,9,10 & 11. *Location: USA	*MIXED-METHODS (questionnaires & interviews) *Longitudinal study of one year. S.E measure: Author developed scale based on School Attitude Scale (Marjoribanks, 2002). Reading achievement measure: (a) Ohio Achievement Test (OAT) (b) Ohio Graduation Test (OGT)	QUAN: Insig. Corr. Btw Reading ach. & ASE. 2) Ethnicity: Ethnic status doesn't affect ASE. QUAL: +ve comments regarding RA & ASE. 2) Hsipanic students had most +ve comments on ASE. Black students had most -ve comments about ASE.	✘
Carroll and Fox (2017)	Reading self-efficacy predicts word reading but not comprehension in both girls and boys.	179 primary school children from grade 4, 5 & 6 (M & F). *Age: 8 to 11 years. *Location: England	QUAN (S.E measure: Author has developed reading self-efficacy questionnaire Reading achievement measure: (a) Vernon-Warden Reading Test (Hedderly, 1996) (b) TOWRE (Torgeson et al., 1997).	1)Both boys and girls were same in terms of reading self-efficacy and reading comprehension achievement. 2) No significant relationship between reading self-efficacy and reading comprehension achievement including both male and female. 3) Sig. relationship btw reading S.E & word reading including both male and female. 4) Age: Older students had higher reading S.E as compared to younger ones.	✘
Coddington and Guthrie (2009)	TEACHER AND STUDENT PERCEPTIONS OF BOYS' AND GIRLS' READING MOTIVATION.	84 students including both male and female, of grade 1 from two elementary schools and 8 female teachers of grade 1. *Location: USA	QUAN S.E measure: (a)YRMQ reading self-efficacy subscale (b) T-YRMQ self-efficacy subscale Reading achievement measure: Woodcock-Johnson Letter-Word Identification substest (Woodcock, Mather, & Schrank, 2004).	1)According to teachers' perceptions the correlation between both male and female students' reading S.E and reading performance was significant. 2) According to students' perceptions, the correlation between reading S.E and RP was significant when analysis was run including both male and female sample. However, when analysed separately, male sample's S.E is correlated to reading	✓

				performance, whereas no correlation between reading S.E of the female sample and their RP.	
Eslami and Fatahi (2008)	Teachers' Sense of Self-Efficacy, English Proficiency, and Instructional Strategies: A Study of Non-native EFL Teachers in Iran.	40 EFL High school Iranian teachers (21 F & 19 M) *Location: Iran	QUAN S.E measure: Teacher Sense of Efficacy Scale based on (Tschannen-Moran & Woolfolk Hoy, 2001). Reading achievement measure: Questionnaire on self-reported proficiency based on Chacón's (2005).	1) No correlation btw S.E & reading proficiency. However, sig. correlation btw S.E & other 3 skills. 2) Out of 4 skills, Iranian teachers are most proficient in reading.	✗
Galla et al., (2014)	A longitudinal multilevel model analysis of the within-person and between person effect of effortful engagement and academic self-efficacy on academic performance.	135 elementary school students btw age of 5 to 12 years (Kindergarten to 6 th grade). *Location: USA	*Longitudinal study of 3 years. QUAN S.E measure: Academic self-efficacy questionnaire for children (Muris, 2001). Reading achievement measure: Stanford Achievement Test (SAT).	1) Academic self-efficacy was significantly correlated to reading performance. 2) Mediation: a) ASE has mediated the relationship between effortful engagement and reading performance. b) Between-person effect of effortful engagement has mediated the correlation between ASE and reading performance. However, within-person effect did not mediate the correlation between ASE and reading performance.	✓
Guthrie, Klauda and Ho (2013)	Modelling the relationships among reading instruction, motivation, engagement, and achievement for adolescents.	1159 students in Grade 7. *Location: USA	QUAN (Pre & post-test) S.E measure: Motivations for Reading Information Books in School (MRIB-S) questionnaire. Reading achievement measure: Reading comprehension test.	1) Self-efficacy was positively correlated to reading comprehension in both the classrooms, i.e., traditional and intervention language arts classrooms. 2) Self-efficacy increased from pre to post intervention.	✓

Jones, Varberg, Manger, Eikeland and Asbjørnsen (2012)	Reading and writing self-efficacy of incarcerated adults.	600 male and female imprisoned adults. Average age = 34.35 years. *Location= Norway	QUAN S.E measure: Reading and writing self-efficacy scale (Shell et al., 1995). Reading achievement measure: (a) Reading and spelling test for college and university students (Stromso, Hagtvvet, Lyster, & Rygvold, 1997). (b) Reading speed test (Handal, 1964).	1) Significant positive correlation between reading performance and reading self-efficacy. 2) Non-verbal reasoning abilities were moderately correlated to reading self-efficacy. 3) Education level: Education level had shown low correlation with reading self-efficacy. 4) All the five variables have explained 36.9 % of the statistical variance in reading self-efficacy.	✓
Klassen (2010).	Confidence to manage learning: the self-efficacy for self-regulated learning of early adolescents with learning disabilities.	146(73 LD & 73 NLD) students of grades 8 and 9 at three high schools. Mean age=13.89 *Location: Canada	QUAN S.E measure: (a) SESRL (Bandura, 1990) (b) Reading self-efficacy scale. Reading achievement measure: Reading test from the Woodcock-Johnson III Tests of Achievement (Woodcock, McGrew, & Mather, 2001).	1)Both self-regulatory efficacy & reading S.E sig. correlated to RC score in both LD & NLD groups. 2) LD group had lower self-regulatory efficacy, RSE & RC score than NLD group. 3) Gender: Girls had higher self-regulatory efficacy than boys in both LD & NLD group. 4) SES: students' parents with low educational achievement had lower level of self-regulatory efficacy and vice versa.	✓
Lau (2009b)	Reading motivation, perceptions of reading instruction and reading amount: a comparison of junior and senior secondary students in Hong Kong.	1146 middle and high school students. *Location: Hong Kong	QUAN S.E measure: A Chinese version of Motivation for Reading Questionnaire (CRMQ) Reading achievement measure: N/A	1) Reading self-efficacy did not predict reading amount. 2) Grade level: Junior high students had higher reading self-efficacy than high school students.	✗
Lee and Jonson-Reid (2016).	The Role of Self-Efficacy in Reading Achievement of Young Children in Urban Schools	881 elementary school students of grades 1, 2 and 3. *Location: USA	QUAN (Pre & post-test) S.E measure: Reading task self-efficacy scale (Pajares, 2002 & Marsh, 1990).	1) Self-efficacy was significantly correlated to reading achievement. 2) Grade: Grade 1 students showed greater reading achievement as compared to grade 2 & 3 students. 3)	✓

			Reading achievement measure: (a) Woodcock Johnson Word Attack (WJ-WA). (b) Woodcock Johnson Passage Comprehension (WJ-PC). (c) Peabody Picture Vocabulary Test III (PPVT-III).	Mediation: Motivation mediated the relationship between self-efficacy and reading achievement.	
Liem, Lau and Nie (2008)	The role of self-efficacy, task value, and achievement goals in predicting learning strategies, task disengagement, peer relationship, and achievement outcome.	1475 grade 9 students *Location: Singapore	QUAN S.E measure: Self-efficacy items extracted from scale named MSLQ (Pintrich et al., 1993). Reading achievement measure: MCQs reading comprehension test (developed by author).	There was a significant and positive relationship between self-efficacy and reading comprehension achievement.	✓
Liew, McTigue, Barrois and Hughes (2008)	Adaptive and effortful control and academic self-efficacy beliefs on achievement: A longitudinal study of 1st through 3rd graders.	733 (lower achieving in literacy) students grade 1 through 3 (three-year longitudinal study) *Location= USA	QUAN & Longitudinal S.E measure: Perceived Competence Scale for Children. Reading achievement measure: Reading portion of Woodcock Johnson-III Tests of Achievement)	1) ASE doesn't mediate btw adaptive/effortful control & reading achievement. 2) ASE positively correlate with reading achievement across all waves. 3) Ethnicity: Non-white students had higher ASE at Wave 1 than white students. By Wave 2, no differences. 4) Gender: Gender had no impact on ASE. However, regarding reading achievement, females have outperformed males across all waves. 5) Age: Age was -ve correlated to reading achievement. It was +ve correlated to ASE at wave 1 and -ve correlated at wave 2. 6) IQ was +ve correlated to reading achievement. Yet, no correlation btw IQ & ASE. 7) Socio-economic status (SES): Students without economic	✓

				adversity (EA) have outperformed students with EA in reading achievement. EA had no impact on ASE.	
Mucherah and Yoder (2008)	Motivation for reading and middle school students' performance on standardized testing in reading.	388 6 th & 8 th grade public school students of both genders *Location= USA	QUAN S.E measure: MRQ questionnaire Reading achievement measure: ISTEP+ reading test	1) S.E is sig. correlated to reading achievement (RA). 2) Gender: Girls have outperformed boys in S.E as well as RA. 3) Grade: Grade 8 students had higher S.E than grade 6 students. 4) Ethnicity: Minority students have outperformed white students in S.E. Yet, white students performed better in RA than minority students. 5) SES: High income students have outperformed low-income students in RA.	✓
Nevill (2008)	The Impact of Reading Self-Efficacy and the Regulation of Cognition on the Reading Achievement of an Intermediate Elementary Sample.	84 students of grade 4,5 & 6 of both genders *Age= 9 to 12 *Location= USA	QUAN S.E measure: RSPS (Henk & Melnick, 1995). Reading achievement measure: Reading achievement test.	1) S.E is sig. correlated to reading achievement. 2) Gender: a) No sig. relation btw S.E & gender. b) Girls outperformed boys in reading. 3) SES: a) Paternal education is related to S.E. b) SES sig. related to RA. 4) Age: a) No sig. relation btw age & S.E. b) + sig. relation btw age & RA.	✓
Osman, Al Khamisi, Al Barwani and Al Mekhlafi (2016)	EFL Reading Achievement: Impact of Gender and Self-efficacy Beliefs.	636 Omani school students from grade 4 and 10 (M & F). Location: Oman	QUAN S.E measure: Author has developed reading self-efficacy scale. Reading achievement measure: Reading achievement tests administered by Omani ministry of Education.	1) Gender: (a) Female students of both the grades have outperformed male in reading achievement. (b) Females of both the grades have higher self-efficacy than males. 2) Grade: Grade 4 students have outperformed grade 10 students in terms of reading S.E beliefs of their R.A. 3) Strong correlation has been found between reading S.E beliefs and RA.	✓

Piercey (2013)	Reading Self-Efficacy in Early Adolescence: Which Measure Works Best?	The sample of the study consisted of 364 students of grade 4, 5 and 6. *Location: USA	QUAN S.E measure: (a) General reading self-efficacy scale (Pajares & Barich, 2005; Pietsch, Walker, & Chapman, 2003). (b) Self-Efficacy for Self-Regulation in Reading Scale based on Children's Self-Efficacy Scale (Bandura, 2006). (c) Reading Skills Self-Efficacy Scale adapted from (Shell et al., 1989). Reading achievement measure: Reading scores of school exam.	1) Reading self-efficacy is significantly correlated to reading performance. 2) Gender and Ethnicity: No differences have been found among students on the basis of gender and ethnicity. 3) Elementary school students have higher reading self-efficacy as compared to middle school students.	✓
Shang (2010)	Reading Strategy Use, Self-Efficacy and EFL Reading Comprehension.	53 freshmen Taiwanese university students majoring in English (Male & Female) *Location: Taiwan	MIXED-METHODS S.E measure: Self-efficacy questionnaire developed based on Language Self-efficacy Scale (Wong 2005) and MSLQ (Pintrich et al., 1991). Reading achievement measure: TOEFL test	1) Sig. correlation btw S.E & RC.	✓
Smith, Smith, Gilmore and Jameson (2012)	Students' self-perception of reading ability, enjoyment of reading and reading achievement.	960 students, i.e., 480 grade 4 students (age= 8 to 9 years) and 480 grade 8 students (age= 12 to 13 years). *Location=New Zealand	QUAN S.E measure: Author has developed reading self-efficacy scale Reading achievement measure: New Zealand's National Education Monitoring Project (NEMP) reading tasks.	1) Reading achievement has increased from grade 4 to grade 8. 2) Reading self-efficacy has decreased from grade 4 to grade 8. 3) Among grade 4 students, there was weak relationship between reading self-efficacy and reading achievement. However, among grade 8 students, reading self-efficacy is moderately correlated to	✓

				reading achievement. 4) Gender: In both grades, girls have outperformed boys in reading self-efficacy as well as reading achievement. 5) SES: Socioeconomic status (SES), among grade 4 and 8 students have shown the same results. It has been found that SES was moderately correlated to reading achievement. However, SES was not correlated to reading self-efficacy.	
Solheim (2011)	The Impact of Reading Self-Efficacy and Task Value on Reading Comprehension Scores in Different Item Formats.	217 school students of the 5 th grade. *Location: Sweden	QUAN S.E measure: Author developed a scale based on 'Motivation for Reading Questionnaire' (Wigfield & Guthrie, 1997) and 'Motivation inventory' (Anmarkrud and Br°aten, 2009). Reading achievement measure: Reading comprehension test	1) Reading self-efficacy was positively and significantly correlated to both MC and CR reading comprehension scores. 2) Gender: Boys had higher reading self-efficacy as compared to girls.	✓
Su and Wang (2012)	A Study of English Self-efficacy and English Reading Proficiency of Taiwanese Junior High School Students beliefs and English reading proficiency.	281 junior high school students (148M & 141F) from grade 7 to grade 9. *Location= Taiwan	QUAN S.E measure: English self-efficacy questionnaire (Chang, 2004). Reading achievement measure: Reading section of CYLE (Cambridge Young Learners English)	1) Students have medium degree of English self-efficacy and English reading proficiency. 2) There were major differences regarding English self-efficacy in favour of female students. 3) Gender: Regarding relationship between self-efficacy and English reading proficiency, no substantial difference has been found regarding gender of the students. 4) English self-efficacy is +ve and sig. correlated to English reading proficiency.	✓

Tabrizi and Jafari (2015)	The Relationship among Critical Thinking, Self-efficacy, and Iranian EFL Learners' Reading Comprehension Ability with Different Proficiency Levels	300 Iranian university students majoring in English Literature. *Location: Iran	QUAN S.E measure: Self-efficacy scale for reading comprehension questionnaire (Ghonsooly & Elahi, 2010). Reading achievement measure: NELSON language proficiency test	1) Significant relationship between self-efficacy and reading comprehension among all proficiency levels. 2) Language proficiency levels: The extent of correlation between self-efficacy and reading comprehension among intermediate proficiency level students was strongest followed by advanced and elementary proficiency level students respectively.	✓
Tobing (2013)	The relationship of reading strategies and self-efficacy with the reading comprehension of high school students in Indonesia.	66 High school students of 12 th grade. Average age =18 *Location= Indonesia	QUAN S.E measure: 'English Reading Self-Efficacy questionnaire' developed by researcher. Reading achievement measure: Reading comprehension test.	1) Self-efficacy is positively and significantly correlated to reading comprehension performance. 2) Self-efficacy has caused 20 % of the prediction to the reading comprehension performance.	✓
Wilson and Kim (2016)	The Effects of Concept Mapping and Academic Self-Efficacy on Mastery Goals and Reading Comprehension Achievement	The sample of the study consisted of 42 elementary school students of 5 th grade. *Age: 11.95 *Location: S Korea	QUAN (pre & post-test) S.E measure: Academic self-efficacy questionnaire (Muris, 2001). Reading achievement measure: TOSEL jr. test.	1) No significant correlation between academic self-efficacy beliefs and reading comprehension. 2) Mediation: Academic self-efficacy beliefs doesn't mediate the correlation between concept mapping strategies & reading comprehension accomplishment.	✗
Yilmaz (2011)	Teachers' perceptions of self-efficacy, English proficiency, and instructional strategies.	54 Turkish EFL teachers including both male and female Turkey	QUAN S.E measure: Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). Reading achievement measure: Teachers' self-reported English proficiency scale derived	1) Out of four English language skills, teachers were most proficient in reading skill. 2) Teachers' self-efficacy is significantly correlated to English proficiency. 3) No significant correlation btw self-efficacy and reading proficiency.	✗

			from (Butler, 2004; Chacon, 2005).		
Yoğurtçu (2012)	The impact of self-efficacy perception on reading comprehension on academic achievement.	The sample of the study consisted of 556 university students. The age of the participants ranged from 20 to 22 years. *Location= Kyrgyzstan	QUAN S.E measure: Scale of Belief Self-efficiency reading comprehension (SSERC) (Epcacan & Demirel, 2011). Reading achievement measure: B1 Level Language Portfolio of European Union.	1) +ve significant correlation btw GPA and reading comprehension self-efficacy. 2) For high self-efficacious students, +ve significant correlation btw reading comprehension self-efficacy and all four skills of foreign language. 3) For low self-efficacious students, reading comprehension self-efficacy was only +ve & significantly correlated to listening skills and not the other three skills.	*For high S.E students=✓ *For low S.E students=✗
Ghabdian and Ghafournia (2016)	The Relationship between Iranian EFL Learners' Self- efficacy Beliefs and Reading Comprehension Ability	120 Iranian students (M & F). Age =15 to 24. *Grade= EFL learners at language schools. *Location: Iran	QUAN S.E measure: Scale was adopted from 3 scales, i.e., (BALLI), designed by (Hortwiz, 1985), Persian Adaptation of the General Self-efficacy Scale (Nezami, Schwarzer & Jerusalem, 1996), and Morgan-Links Student Efficacy Scale (MJSES) (Jinks and Morgan, 1999). Reading achievement measure: Reading part of Michigan Test.	1) Positive significant relationship between self-efficacy beliefs and reading comprehension. 2) Gender: Gender did not affect self-efficacy beliefs.	✓
Ghonsooly (2010)	Learners' Self-efficacy in Reading and its relation to Foreign Language Reading Anxiety and Reading Achievement.	150 sophomores majoring in English literature at three universities. *Location= Iran	QUAN S.E measure: Author developed a new scale based on three different self-efficacy scales.	1) Significant +ve correlation between reading self-efficacy and reading comprehension achievement. 2) Students who have high level of self-efficacy have scored higher in reading comprehension test as	✓

			Reading achievement measure: GPA of reading courses	compared to the students with low level of self-efficacy.	
Habibian and Roslan (2014)	The Relationship between Self-Efficacy in Reading with Language Proficiency and Reading Comprehension among ESL Learners.	64 Masters & PhD students selected from 2 Malaysian universities (from faculty of Agriculture, engineering, and education). *Location: Malaysia	QUAN S.E measure: Scale of Belief Self-Efficacy Comprehension developed by (Demirel & Epçagan, 2011). Reading achievement measure: Two reading comprehension passages adopted from Carrel (1991).	1) Significant correlation between self-efficacy and reading comprehension. 2) Language proficiency level: Level of self-efficacy is different for all three level of language proficiency. The students who are high self-efficacious possess high language proficiency and vice versa. 3) After comparing the two types of students, i.e., high self-efficacious and high proficient, it was revealed that latter have performed better in reading comprehension.	✓
Hager (2017)	The Relationship of Reading Self-Efficacy and Reading Achievement in Second Grade Students.	43 2 nd grade American students(M&F) *Age 7 to 9 years. *Location: USA	*MIXED-METHODS S.E measure: Motivation for Reading Questionnaire (MRQ) (Wigfield & Guthrie, 1997). Reading achievement measure: (a) 2011 Dibels Next Reading End of Year Benchmark test. (b) Northwest Evaluation Association Measures of Academic Progress (MAP) Reading for Primary grades test.	QUAN: Positive insignificant relationship between reading self-efficacy and reading achievement. QUAL: Most prominent difficulty that they faced during reading is encountering large words.	✓
Hedges and Gable (2016)	The Relationship of Reading Motivation and Self- Efficacy to Reading Achievement.	QUAN=498 middle level school students of grades5, 6, 7 and 8. QUAL= 4 reading experts.	*MIXED-METHODS (questionnaires and interviews). S.E measure: The Reader Self-Perception	QUAN: 1) Reading self-efficacy was significantly correlated to reading accomplishment.	✓

		*Location: USA	Scale2 (RSPS2) (Melnick, Henk, & Marinak, 2009). Reading achievement measure: The AIMSWeb Reading Curriculum-Based Measurement	2) Grade: Students' reading self-efficacy of all the grades, i.e., 5, 6, 7 and 8 was significantly correlated to reading achievement. QUAL: There is a strong relationship between self-efficacy and reading achievement. Therefore, there is a need to address the issues regarding reading self-efficacy in schools.	
McGirt (2017)	Improving Academic Self-Efficacy in Reading Comprehension Skills of 8th Grade Gifted and Talented Students	15 8 th grade students. *Location= USA	QUAN (Pre & post-test) S.E measure Children's Perceived Academic Self-Efficacy subscale. Reading achievement measure: The 8th grade Reading End-of-Grade Assessment.	Academic self-efficacy is positively and significantly correlated with reading comprehension performance.	✓
Nasari and Ghabanchi (2014).	The relationship between self-efficacy beliefs, locus of control and reading comprehension ability of Iranian EFL advance learners.	81 EFL university students of both genders, majoring in English. *Location=Iran	QUAN S.E measure: Reading Self-efficacy Beliefs Questionnaire (Ghonsooly & Elahi, 2011). Reading achievement measure: Michigan reading comprehension test.	Self-efficacy is positively and significantly correlated to reading comprehension	✓
Nasari and Zaferanieh (2012)	The Relationship Between Reading Self-efficacy Beliefs, Reading Strategy Use and Reading Comprehension Level Of Iranian EFL Learners.	80 university students majoring in English literature & translation of both genders (59 F & 21 M). *Location= Iran	QUAN S.E measure: Reading Self-efficacy Beliefs Questionnaire (Ghonsooly & Elahi, 2011).	1) Significant +ve correlation btw reading self-efficacy & reading comprehension. 2) Gender: Gender has made no difference in the relationship between reading self-efficacy and reading comprehension.	✓

			Reading achievement measure: Reading comprehension part of Michigan Test.	
Piran (2014)	The Relationship between Self-concept, Self-efficacy, Self-esteem and Reading Comprehension Achievement: Evidence from Iranian EFL learners.	92 Iranian EFL learners studying in a language institution. *Location: Iran	QUAN S.E measure: Reading Self-efficacy Beliefs Questionnaire (Ghonsooly & Elahi, 2010). Reading achievement measure: Reading comprehension section of TOEFL.	Self-efficacy was not significantly correlated to reading comprehension achievement. ✘
Rachmajanti and Musthofiyah (2017)	The relationship between reading self-efficacy, reading attitude and EFL reading comprehension based on gender difference.	208 Indonesian EFL students of both genders btw age of 19 and 24. *Location: Indonesia	QUAN S.E measure: Reading self-efficacy questionnaire Reading achievement measure: Reading comprehension test	1) Significant relationship btw reading self-efficacy and reading comprehension achievement, in case of male sample. 2) In case of female sample, no significant relationship btw S.E & RC. 3) Female sample had higher reading comprehension scores as compared to male. ✓
Salehi and Khalaji (2014)	The Relationship between Iranian EFL Upper Intermediate Learners' Self-Efficacy and their Reading Comprehension Performance.	The sample consisted of 48 Iranian upper-intermediate EFL students. *Location=Iran	*MIXED-METHODS S.E measure: 'Reading self-efficacy questionnaire' based on 'English Self-efficacy Questionnaire' by Wang (2007). Reading achievement measure: Reading comprehension section of TOEFL.	QUAN: Significant positive correlation between self-efficacy and reading comprehension. QUAL: Qualitative findings have supported the quantitative findings. ✓
Schöber et al. (2018)	Reciprocal effects between self-efficacy and achievement in	1597 secondary school students. *Location: Germany	QUAN (Longitudinal study)	1. Reading achievement at T1 influenced reading self-efficacy at T2 significantly.

	mathematics and reading.		S.E measure: Reading self-efficacy scale (Jerusalem & Satow, 1999 ; Kunter et al., 2002). Reading achievement measure: Standardized reading test.	2. Reading self-efficacy at T1 did not influence reading achievement at T2.	
Oh (2016)	Relationships Among Perceived Self-Efficacy, Vocabulary and Grammar Knowledge, and L2 Reading Proficiency	95 university students. *Location: Korea.	QUAN S.E measure: Reading perceived self-efficacy questionnaire (Mills et al., 2006). Reading achievement measure: L2 Reading proficiency test.	All the four types of self-efficacy are significantly correlated with L2 reading proficiency.	✓
Murad Sani and Zain (2011)	Relating Adolescents' Second Language Reading Attitudes, Self-efficacy for Reading, and Reading Ability in a Non-Supportive ESL Setting	200 teenage children of 16 years old *Location: Malaysia.	QUAN S.E measure: BJP Reading Attitude Survey Reading achievement measure: English reading comprehension measure.	Results indicated that there was a positive significant relationship between reading self-efficacy and English reading comprehension ability.	✓

Note. '✓' refers to significant relationship ($p < .05$). '×' refers to insignificant relationship. 'ASE' refers to academic self-efficacy. 'SES' refers to socio-economic status.